

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, 2010

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 of incorporation)

74-2763837  
(I.R.S. Employer Identification No.)

4137 Commerce Circle  
Idaho Falls, Idaho, 83401  
(Address of principal executive offices)

(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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated Filer

Non-accelerated filer  (Do not check if smaller reporting company) 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 August 13, 2010 the number of shares of Common Stock, \$.01 par value, outstanding was 293,944,348.

INTERNATIONAL ISOTOPES INC.  
For The Quarter Ended June 30, 2010

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Part I. Financial Information  
Item 1. Financial Statements

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES  
Unaudited Condensed Consolidated Balance Sheets

Assets	June 30, 2010	December 31, 2009
<b>Current assets</b>		
Cash and cash equivalents	\$ 1,192,310	\$ 461,091
Accounts receivable	942,289	481,702
Inventories	1,920,851	1,835,345
Prepays and other current assets	48,460	126,316
Total current assets	<u>4,103,910</u>	<u>2,904,454</u>
<b>Long-term assets</b>		
Restricted certificate of deposit	427,390	264,751
Property, plant and equipment, net	2,269,542	2,475,466
Capitalized lease disposal costs, net	168,212	196,287
Investment	1,290,000	1,290,000
Patents and other intangibles, net	242,006	250,347
Total long-term assets	<u>4,397,150</u>	<u>4,476,851</u>
Total assets	<u>\$ 8,501,060</u>	<u>\$ 7,381,305</u>
<b>Liabilities and Stockholders' Equity</b>		
<b>Current liabilities</b>		
Accounts payable	\$ 608,974	\$ 569,076
Accrued liabilities	777,536	351,437
Deferred revenue	8,226	-
Current installments of notes payable	501,623	126,480
Current installments of capital leases	28,977	37,061
Total current liabilities	<u>1,925,336</u>	<u>1,084,054</u>
<b>Long-term liabilities</b>		
Obligation for lease disposal costs	429,237	412,569
Notes payable, excluding current installments	524,590	963,657
Capital leases, excluding current installments	-	9,930
Convertible debentures, net of beneficial conversion feature of \$527,145	2,547,855	-
Mandatorily redeemable convertible preferred stock	850,000	850,000
Total long-term liabilities	<u>4,351,682</u>	<u>2,236,156</u>
Total liabilities	<u>6,277,018</u>	<u>3,320,210</u>
<b>Stockholders' Equity</b>		
Common stock, \$0.01 par value; 500,000,000 shares authorized; 293,929,827 and 293,677,806 shares issued and outstanding respectively	2,939,298	2,936,777
Additional paid-in capital	101,609,647	100,477,289
Accumulated deficit	<u>(102,324,903)</u>	<u>(99,352,971)</u>
Total stockholders' equity	<u>2,224,042</u>	<u>4,061,095</u>
Total liabilities and stockholders' equity	<u>\$ 8,501,060</u>	<u>\$ 7,381,305</u>

See accompanying notes to condensed consolidated financial statements.

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

	Three Months ended June 30,		Six Months ended June 30,	
	2010	2009	2010	2009
Sale of product	\$ 1,485,293	\$ 1,485,599	\$ 2,594,844	\$ 3,185,269
Cost of product	748,373	684,741	1,482,243	1,515,477
Gross profit	<u>736,920</u>	<u>800,858</u>	<u>1,112,601</u>	<u>1,669,792</u>
Operating costs and expenses:				
Salaries and contract labor	448,795	519,034	967,876	1,055,088
General, administrative and consulting	478,838	457,873	850,203	889,514
Research and development	1,362,805	580,867	2,018,970	1,053,306
Total operating expenses	<u>2,290,438</u>	<u>1,557,774</u>	<u>3,837,049</u>	<u>2,997,908</u>
Net operating loss	<u>(1,553,518)</u>	<u>(756,916)</u>	<u>(2,724,448)</u>	<u>(1,328,116)</u>
Other income (expense):				
Other income (expense)	19,103	20,872	16,063	37,316
Interest income	667	1,718	1,714	7,675
Interest expense	(173,322)	(24,308)	(265,261)	(63,436)
Total other expense	<u>(153,552)</u>	<u>(1,718)</u>	<u>(247,484)</u>	<u>(18,445)</u>
Net loss	<u>\$ (1,707,070)</u>	<u>\$ (758,634)</u>	<u>\$ (2,971,932)</u>	<u>\$ (1,346,561)</u>
Net loss per common share - basic and diluted	<u>\$ (0.01)</u>	<u>\$ (0.00)</u>	<u>\$ (0.01)</u>	<u>\$ (0.00)</u>
Weighted average common shares outstanding - basic and diluted	<u>293,926,893</u>	<u>288,870,769</u>	<u>293,900,022</u>	<u>288,836,531</u>

See accompanying notes to condensed consolidated financial statements.

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES			
Unaudited Condensed Consolidated Statements of Cash Flows			
		Six Months ended June 30,	
		2010	2009
Cash flows from operating activities:			
Net loss		\$ (2,971,932)	\$ (1,346,561)
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation and amortization		231,112	204,785
Loss on disposal of property, plant and equipment		14,635	3,100
Accretion of obligation for lease disposal costs		16,668	9,794
Accretion of beneficial conversion feature		175,712	-
Equity based compensation		418,982	312,177
Changes in operating assets and liabilities:			
Accounts receivable		(460,587)	(146,369)
Prepays and other assets		77,856	48,294
Deferred revenue		8,226	(102,814)
Inventories		(85,506)	(181,749)
Accounts payable and accrued liabilities		465,997	43,921
Net cash used in operating activities		(2,108,837)	(1,155,422)
Cash flows from investing activities:			
Restricted certificate of deposit		(162,639)	(1,845)
Proceeds from sale of property, plant and equipment		3,800	1,900
Purchase of property, plant and equipment		(7,207)	(142,216)
Net cash used in investing activities		(166,046)	(142,161)
Cash flows from financing activities:			
Proceeds from sale of stock		13,040	13,615
Proceeds from issuance of convertible debentures		3,075,000	-
Proceeds from issuance of debt		-	26,769
Principal payments on notes payable and capital leases		(81,938)	(62,732)
Net cash provided by (used in) financing activities		3,006,102	(22,348)
Net (decrease) increase in cash and cash equivalents		731,219	(1,319,931)
Cash and cash equivalents at beginning of period		461,091	2,149,340
Cash and cash equivalents at end of period		\$ 1,192,310	\$ 829,409
Supplemental disclosure of cash flow activities:			
Cash paid for interest		\$ 47,900	\$ 93,648
Supplemental disclosure of noncash transactions:			
Increase in equity for the beneficial conversion feature associated with the convertible debentures		\$ 702,857	-
Retirement of 77,091 shares of common stock at \$0.18 per share to cover certain payroll taxes of employees in connection with shares granted to employees for restricted stock awards		\$ -	\$ 13,877
See accompanying notes to condensed consolidated financial statements.			

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES  
Notes to Unaudited Condensed Consolidated Financial Statements  
June 30, 2010

(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., International Isotopes Fluorine Products, Inc., and International Isotopes Transportation Services, Inc., all of which are Idaho corporations. The Company’s headquarters and all operations are located in Idaho Falls, Idaho.

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

With the exception of certain unique products, the Company’s normal operating cycle is considered to be one year. Due to the time required to produce some cobalt products, the Company’s operating cycle for those products is considered to be three years. All assets expected to be realized in cash or sold during the normal operating cycle of 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. 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 six-month period ended June 30, 2010, are not necessarily indicative of the results that may be expected for the year ended December 31, 2010. The accompanying financial statements should be read in conjunction with the Company’s most recent audited financial statements.

*Reclassification* – For the three and six months ended June 30, 2010, costs related to the work on the de-conversion and fluorine extraction project have been reported as research and development expense. These costs were reported as general and administrative expense for the period ended March 31, 2009; consequently, the prior year information has been reclassified to report these costs as if they had been previously reported as research and development expense. This reclassification had no affect on net loss.

*Recent Accounting Pronouncements* - In May 2009, the FASB issued a new standard which establishes general standards of accounting for and disclosure of events that occur after the balance sheet date but before financial statements are issued or are available to be issued. This guidance, among other things, sets forth the period after the balance sheet date during which management should evaluate events or transactions that may occur for potential recognition or disclosure in the financial statements, the circumstances under which an entity should recognize events or transactions occurring after the balance sheet date in its financial statements, and the disclosures an entity should make about events or transactions that occurred after the balance sheet date. In February 2010, new guidance was issued which removes the requirement for public companies to disclose the date through which subsequent events were reviewed. This guidance was effective upon issuance and has been adopted by the Company.

In April 2010, the FASB issued guidance related to accounting for certain tax effects of the 2010 Health Care Reform Acts. This update clarifies questions surrounding the accounting implications of the different signing dates of the Health Care and Education Reconciliation Act (signed March 30, 2010) and the Patient Protection and Affordable Care Act (signed March 23, 2010). This guidance states that the FASB and the Office of the Chief Accountant at the SEC would not be opposed to view the two Acts together for accounting purposes. The Company is currently assessing the impact, if any, the adoption of this guidance will have on the Company's disclosures, operating results, financial position and cash flows.

In January 2010, the FASB issued guidance related to escrowed share arrangement and the presumption of compensation. This update provides clarification when escrowed shares are considered compensation or in substance an inducement made to facilitate certain transactions. This guidance was effective upon issuance. The Company has adopted this guidance which had no impact on the Company's operations, financial position, cash flow or disclosures.

## (2) Current Developments and Liquidity

*Business Condition* – Since inception, the Company has suffered substantial losses. During the six-month period ended June 30, 2010, the Company reported a loss of \$2,971,932 and operations used cash of \$2,108,837. During the same period in 2009, the Company reported a loss of \$1,346,561 and operations used cash of \$1,155,422. 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. The Company expects that such investments will exceed current revenue from sales by a significant amount. 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 2013 at the earliest. Management expects to generate sufficient cash flows from the existing business segments to meet operational needs during 2010; however, there is no assurance that these cash flows will occur. In addition, the Company will require additional capital to support ongoing efforts to expand the Company's business to include the planned large scale uranium de-conversion processing and fluorine extraction plant. Current expenditures on that project include licensing, design, and related subcontractor project efforts.

The Company's effort 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 new uranium enrichment facilities in the U.S., and these facilities will produce a large amount of depleted uranium hexafluoride (UF6) 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 2010 and 2011. In April of 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 upon the commencement of commercial operations of the Company's planned de-conversion facility. The term of the agreement extends through the first five years of the Company's operation of its planned uranium de-conversion facility in Hobbs, New Mexico. 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.

On June 16, 2010, the Company filed a Form S-3 "shelf" registration statement with the SEC. Pursuant to this shelf registration statement, the Company may from time to time sell common stock, preferred stock, debt securities, convertible debt securities or warrants to purchase common stock, preferred stock, debt securities or convertible debt securities, or any combination of the foregoing, either individually or as units comprised of one or more of the other securities, in one or more offerings up to a total dollar amount of \$100,000,000. The Company hopes to raise funds through one or more registered offerings to support the construction and start-up costs of the depleted uranium de-conversion facility.

### (3) Net Loss Per Common Share - Basic and Diluted

At June 30, 2010, and 2009, 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,	
	2010	2009
Stock options	26,700,000	27,080,000
Warrants	25,940,637	21,533,331
Restricted stock awards issued under the 2006 Equity Incentive Plan	579,947	994,850
850 shares of Series B redeemable convertible preferred stock	425,000	425,000
Convertible debentures and accrued interest	8,907,997	
	<u>62,553,581</u>	<u>50,033,181</u>

#### (4) Investments

At June 30, 2010, 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 is unable to exert significant control or influence over the operations or policies of RadQual, LLC. Accordingly, the investment in RadQual, LLC is recorded on the cost method at the lower of cost or fair value. The 24.5% ownership of RadQual, LLC has been recorded at a cost of \$1,290,000. For the six months ended June 30, 2010, member distributions from RadQual, LLC totaled \$30,436 and for the similar period in 2009, member distributions totaled \$40,365. These distributions were recorded as Other Income.

At June 30, 2010, and 2009, the Company had receivables from RadQual, LLC in the amount of \$469,988 and \$426,840, respectively, which are recorded as part of accounts receivable. For the six months ended June 30, 2010 and 2009, the Company had revenues from RadQual, LLC in the amount of \$1,674,925 and \$1,607,490, respectively, which are recorded as sale of product.

#### (5) Inventories

Inventories consisted of the following at June 30, 2010, and December 31, 2009:

	<u>June 30, 2010</u>	<u>December 31, 2009</u>
Raw materials	\$ 268,585	\$ 251,035
Work in progress	1,652,266	1,584,310
	<u>\$ 1,920,851</u>	<u>\$ 1,835,345</u>

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

Work in progress includes cobalt-60 isotopes that are located in the U.S. federal government's Advanced Test Reactor (ATR) located outside Idaho Falls, Idaho. These isotopes are at various stages of irradiation. Some isotopes are near completion and others may require several years to complete. At June 30, 2010, and December 31, 2009, these isotopes had a carrying value of \$1,339,286 and \$1,154,459, respectively. This value is based on accumulated costs which are allocated based on the length of time isotopes remain in the reactor.

#### (6) Convertible Debentures and Notes Payable

On February 24, 2010, the Company entered into a securities purchase agreement with certain institutional and private investors pursuant to which it sold convertible debentures for an aggregate of \$3,075,000, which accrue a fixed sum of interest equal to 6% of the principal amount automatically upon issuance of the debenture. These debentures are convertible at the option of the holders into shares of

common stock at an initial conversion price equal to \$0.35, subject to certain adjustments. Upon maturity on August 24, 2011, the outstanding principal amount of the debentures and all accrued but unpaid interest will be converted into common stock at a conversion price equal to the lesser of \$0.35 or the average closing price of our common stock for the 120 consecutive trading days up to, but not including, the maturity date, subject to adjustment as set forth in the debentures. To the extent any of the debentures are outstanding as of the maturity date and are automatically converted pursuant to the terms of the debentures, then investors holding such debentures will receive warrants to purchase the number of shares of common stock equal to one half of the number of shares of common stock issued upon automatic conversion of the debenture. The Company can prepay all or part of the principal without penalty provided interest is paid proportionately with the principal being prepaid. The fair market value of the Company's common stock was \$0.43 per share on the date of the agreement. Consequently, the difference between the anticipated conversion price of \$0.35 and the closing price of \$0.43, multiplied by the number of issuable common shares upon conversion, has been recorded as a beneficial conversion feature with an increase to equity and a debt discount in the amount of \$702,877. This amount will be accreted to interest expense over the remaining life of the debt.

The securities purchase agreement provides the investors with certain registration rights should the debt be converted to stock. An investor may demand that the Company register the securities if it is unable to sell the securities at any time following the six-month holding period provided in Rule 144. The Company is to use all commercially reasonable efforts to file a "shelf" registration statement within 45 days of notice, cause the registration statement to be effective with 120 days of notice and keep the registration statement continuously effective for five years after the effective date or until the underlying securities have been sold.

If the Company fails to timely file the registration statement or maintain its effectiveness, the Company is required to pay a monthly penalty equal to the greater of 1% of the purchase price paid by the investor or 1% of the market value of the shares then outstanding. Demand for registration has not yet been made.

## (7) Stockholders' Equity, Options and Warrants

### Employee Stock Purchase

During the six months ended June 30, 2010, and 2009, the Company issued 33,018, and 80,072 shares of common stock, respectively, to employees for proceeds of \$13,040, and \$13,615, respectively. Subsequent to June 30, 2010, the Company issued 14,521 shares of common stock to employees for proceeds of \$4,443. 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 the cost of employee services received in exchange for an award of equity

instruments in the financial statements and 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, 2010, and changes during the six months ended June 30, 2010, were as follows:

		Weighted Average Exercise Price	Weighted Average Remaining Term	Aggregate Intrinsic Value
Fixed Options	Shares			
Outstanding at December 31, 2009	26,700,000	\$ 0.16		
Granted	-	-		
Exercised	-	-		
Forfeited	-	-		
Outstanding at June 30, 2010	<u>26,700,000</u>	0.16	4.9	\$5,669,500
Exercisable at June 30, 2010	<u>19,835,000</u>	0.09	3.6	\$5,450,225

The intrinsic value of outstanding and exercisable shares is based on a June 30, 2010, closing price of the Company's common stock of \$0.355 per share.

As of June 30, 2010, there was approximately \$906,596 of unrecognized compensation cost related to stock options that will be recognized over a weighted average period of 2.0 years.

#### Restricted Stock Grants

Restricted stock awards outstanding as June 30, 2010, and changes during the six months ended June 30, 2010, were as follows:

Restricted Stock Awards	Shares
Non-vested at December 31, 2009	876,014
Granted	-
Vested	(219,003)
Forfeited	(77,064)
Non-vested at June 30, 2010	579,947

The value of non-vested stock under the 2006 Equity Incentive Plan at June 30, 2010, was \$205,881 and is based on a June 30, 2010, value of \$0.355 per share. As of June 30, 2010, there was approximately \$40,596 of unamortized deferred compensation that will be recognized over a weighted average period of 1.8 years.

Compensation expense charged against income for stock based awards during the six-month period ended June 30, 2010, was \$421,522 of which \$418,982 is included in general and administrative expense and \$2,540 is included in research and development expense. Stock based compensation expense for this same period in 2009 was \$312,177 and is included in general and administrative expense in the accompanying financial statements.

#### (8) Commitments and Contingencies

##### Dependence on Third Parties

The production of HSA 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, but in July 2010, the Company entered into a three-year Work For Others agreement with the DOE prime operating contractor to continue cobalt production and cask handling. However, continued access to the reactor for cobalt production still 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 radiochemical iodine sold by the Company is provided through a supply agreement with a single entity, NTP Radioisotopes (Pty) Ltd. 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.

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 20, 2010, at the Company's Annual Meeting of Shareholders, an amendment to the Company's Restated Articles of Incorporation was approved. The amendment increased the number of authorized shares of common stock, having a par value of \$0.01 per share, from 500,000,000 to 750,000,000. This increase in authorized shares has been reflected on the Consolidated Balance Sheet as of June 30, 2010 and December 31, 2009.

### (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:

Sale of Product	Three months ended June 30,		Six months ended June 30,	
	2010	2009	2010	2009
Radiochemical Products	\$ 404,620	\$ 398,895	\$ 848,660	\$ 747,666
Cobalt Products	486,377	375,759	646,262	1,114,039
Nuclear Medicine Standards	483,520	466,113	917,039	955,099
Radiological Services	57,876	154,600	105,533	234,953
Flourine Products	-	-	-	878
Transportation	52,900	90,232	77,350	132,634
Total Segments	1,485,293	1,485,599	2,594,844	3,185,269
Corporate revenue	-	-	-	-
Total Consolidated	\$ 1,485,293	\$ 1,485,599	\$ 2,594,844	\$ 3,185,269
Depreciation and Amortization	Three months ended June 30,		Six months ended June 30,	
	2010	2009	2010	2009
Radiochemical Products	\$ 9,350	\$ 9,866	\$ 18,799	\$ 19,789
Cobalt Products	27,619	26,128	55,238	52,291
Nuclear Medicine Standards	1,278	1,190	2,556	1,758
Radiological Services	2,600	2,600	5,200	5,200
Flourine Products	48,129	50,597	99,054	101,037
Transportation	7,414	6,872	16,525	12,892
Total Segments	96,389	97,253	197,371	192,967
Corporate depreciation and amortization	28,248	5,872	33,741	11,818
Total Consolidated	\$ 124,637	\$ 103,125	\$ 231,112	\$ 204,785
Segment Income (Loss)	Three months ended June 30,		Six months ended June 30,	
	2010	2009	2010	2009
Radiochemical Products	\$ 19,793	\$ 39,692	\$ 77,550	\$ 95,704
Cobalt Products	287,241	230,702	263,342	592,102
Nuclear Medicine Standards	223,078	178,605	396,603	406,901
Radiological Services	26,737	96,001	35,427	155,108
Flourine Products	(1,508,477)	(758,911)	(2,232,930)	(1,435,098)
Transportation	(22,775)	2,938	(50,973)	(15,320)
Total Segments	(974,402)	(210,973)	(1,510,980)	(200,603)
Corporate loss	(732,668)	(547,661)	(1,460,952)	(1,145,958)
Net Loss	\$ (1,707,070)	\$ (758,634)	\$ (2,971,932)	\$ (1,346,561)
Expenditures for Segment Assets	Three months ended June 30,		Six months ended June 30,	
	2010	2009	2010	2009
Radiochemical Products	\$ -	\$ -	\$ -	\$ -
Cobalt Products	-	-	-	-
Nuclear Medicine Standards	-	13,801	-	23,531
Radiological Services	-	-	-	-
Flourine Products	-	7,844	7,207	37,032
Transportation	-	34,332	-	81,653
Total Segments	-	55,977	7,207	142,216
Corporate purchases	-	-	-	-
Total Consolidated	\$ -	\$ 55,977	\$ 7,207	\$ 142,216
Segment Assets	June 30,	December 31,		
	2010	2009		
Radiochemical Products	\$ 269,577	\$ 314,386		
Cobalt Products	2,616,926	2,150,012		
Nuclear Medicine Standards	584,502	546,521		
Radiological Services	42,922	38,708		
Flourine Products	1,790,147	1,884,243		
Transportation	60,790	95,749		
Total Segments	5,364,864	5,029,619		
Corporate assets	3,136,196	2,351,686		
Total Consolidated	\$ 8,501,060	\$ 7,381,305		

## **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; 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 our annual report on Form 10-K for the fiscal year ended December 31, 2009 filed with the securities and Exchange Commission on March 31, 2010. 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, 2010, and 2009*

Revenues for the three-month period ended June 30, 2010, were \$1,485,293, as compared to \$1,485,599 for the same period in 2009, a decrease of \$306 or less than 1%. All business segments showed increases in revenues with the exception of the Radiological Services and Transportation segments which reported decreases in revenue of 63% and 41%, respectively, for the second quarter of the 2010 fiscal year, as compared to the same period in 2009. The following table illustrates a year-to-year comparison of segment revenue for the three-month periods ended June 30, 2010 and 2009:

Sale of Product	Three months ended June 30,			
	2010	2009	Increase (Decrease)	% Change
Radiochemical Products	\$ 404,620	\$ 398,895	5,725	1%
Cobalt Products	486,377	375,759	110,618	29%
Nuclear Medicine Standards	483,520	466,113	17,407	4%
Radiological Services	57,876	154,600	(96,724)	-63%
Flourine Products	-	-	-	-
Transportation	52,900	90,232	(37,332)	-41%
Total Segments	1,485,293	1,485,599	(306)	-0.02%
Corporate revenue	-	-	-	-
Total Consolidated	\$ 1,485,293	\$ 1,485,599	\$ (306)	-0.02%

Gross profit for the three-month period ended June 30, 2010, was \$736,920 compared to \$800,858, for the same period in 2009. This represents a decrease of \$63,938, or 8%. The decrease in gross profit is due to total sales remaining relatively unchanged coupled with increases in the cost of product materials. Operating expenses increased to \$2,290,438 for the three-month period ended June 30, 2010, compared to \$1,557,774 for the same period in 2009. This represents an increase of \$732,664 or approximately 47%. The following table shows a year to year comparison of total operating expenses for the three-month period:

	Three Months ended June 30,			
	2010	2009	Increase (Decrease)	% Change
Operating costs and expenses:				
Salaries and contract labor	\$ 448,795	\$ 519,034	\$ (70,239)	-14%
General, administrative and consulting	478,838	457,873	20,965	5%
Research and development	1,362,805	580,867	781,938	135%
Total operating expenses	\$ 2,290,438	\$ 1,557,774	\$ 732,664	47%

As illustrated, the increase in operating costs and expenses is directly attributable to research and development expenses associated with the planning and licensing of the planned depleted uranium de-conversion facility. Salaries and contract labor decreased by \$70,239, or approximately 14%, for the three-month period ended June 30, 2010, as compared to the same period in 2009. General administrative costs increased by \$20,965, or approximately 5%, for this same period, to \$478,838 for the three months ended June 30, 2010, as compared to \$457,873 for the same period in 2009. Research and development costs increased by \$781,938, or approximately 135%, for the three months ended June 30, 2010, to \$1,362,805, as compared to \$580,867 for the same period in 2009. The decrease in salaries and contract labor expense is a result of personnel being redirected to support the research and development work related to the de-conversion facility project. The slight increase in general administrative costs is a result of overall corporate administrative support to all business segments including the general and administrative support for the de-conversion project. The significant 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 as the uranium de-conversion project progresses. Our net loss for the three-month period ended June 30, 2010, was \$1,707,070, as compared to \$758,634 for the same period in 2009. This is an increase in loss of \$948,436, or 125%, and was largely attributable to the increases in research and development related to the planned depleted uranium de-conversion and fluorine extraction processing facility.

Interest expense for the three-month period ended June 30, 2010, was \$173,322, as compared to \$24,308 for the same period in 2009. The increase of \$149,014, or 613%, is primarily interest expense recorded as a result of the

convertible debentures we issued in February 2010 to various institutional and private investors. The debentures contain a beneficial conversion feature, and accordingly, we have recorded this feature as a contra-liability while simultaneously accreting the beneficial portion of the debt as interest expense over the 18-month life of the agreement.

*Radiochemical Products.* Revenues from the sale of radiochemical products for the three-month period ended June 30, 2010, were \$404,620, compared to \$398,895 for the same period in 2009. This represents a slight increase in revenue of \$5,725, or approximately 1%. Historically, annual revenue growth in this segment has been approximately 20% or greater. However, due to tighter market conditions which have persisted over the past year, iodine sales have remained steady for the three-month period ended June 30, 2010, without showing significant increase. Gross profit in this segment for the three months ended June 30, 2010, was \$53,426, compared to \$100,973 for the same period in 2009. Gross profit percentages were approximately 13% and 25%, for the second quarter of 2010 and 2009, respectively. This decrease in gross profit reflects the period-to-period decrease in sales coupled with an increase in the cost of materials, such as iodine-131, as well as increased freight and shipping costs. Operating expense for this segment for the three-month period ended June 30, 2010, was \$33,634, as compared to \$61,281, for the same period in 2009. This decrease of \$27,647, or 45%, is the result of management's on-going efforts to reduce all operating expenses. Net income for this segment decreased for the three-month period ended June 30, 2010, to \$19,793, from \$39,692 for the same period in 2009, a decrease of \$19,899, or approximately 50%. We intend to increase pricing of radiochemical products in the second half of 2010 and have implemented alternate shipment methods, which we expect will increase revenues and reduce costs in this segment.

*Cobalt Products.* Revenues from the sale of cobalt products for the three-month period ended June 30, 2010, were \$486,377, compared to \$375,759 for the same period in 2009. This represents an increase in revenue attributable to this segment of \$110,618, or approximately 29%. This increase in segment revenue is the result of increased efforts in marketing sealed source products world-wide. Gross profit in this segment for the three-month period ended June 30, 2010 was \$351,598, compared to \$273,396 for the same period in 2009. This increase in gross profit of \$78,202 is due to increased sales coupled with successful efforts to maintain decreased manufacturing costs. Operating expense in this segment increased by \$21,663 to \$64,357 for the three-month period ended June 30, 2010, from \$42,694 for the same period in 2009. This increase was primarily due to general support and supply costs incurred to support product manufacturing in this segment. Net income for this segment was \$287,241 for the three-month period ended June 30, 2010, as compared to \$230,702 for the same period in 2009. The increase in net income of \$56,539 is attributable to increased sealed source sales, particularly sales in South America, where we have continued to expand our market. We anticipate continued growth in this segment for 2010 as foreign markets increase their purchases. We will continue to market our sealed source products in foreign markets, particularly South America, and will continue to research and pursue additional transportation containers for shipment of material.

We have a contract with one customer, GE-Hitachi, pursuant to which we supply all of its bulk cobalt requirements. This contract was renewed in April 2010 with a term of four years. The contract requires minimum annual purchases of material, and any shortages in annual purchases are to be invoiced to the customer. Under the contract, we expect to have a minimum of \$2,656,000 in bulk cobalt sales to GE-Hitachi over the four-year period.

The production of HSA 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. A loss of the ability to use this reactor would cause a significant negative impact on both our bulk cobalt sales and sealed source sales. 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. However, continued access to the reactor for cobalt production 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, 2010, were \$483,520, compared to \$466,113 for the same period in 2009. This represents an increase in revenue attributable to this segment of \$17,407, or approximately 4%. Gross profit for this segment for the three-month period ended June 30, 2010, was \$255,553, as compared to \$213,825 for the same period in 2009, or 53% and 46% of nuclear medicine segment sales, respectively. Operating expense for this segment for the three-month period ended June 30, 2010 decreased to \$32,475, from \$35,219 for the same period in 2009, a decrease of \$2,744 or approximately 8%. The small decrease in operating expense was the result of management's successful efforts to limit operating costs in the nuclear medicine products segment. Net income for this segment increased \$44,473, or approximately 25%, to \$223,078 for the period ended June 30, 2010, as compared to \$178,605, for the same period in 2009. Management believes that this increase is reflective of the resumption of necessary purchases by customers who, because of economic conditions, had previously postponed these purchases. We are taking steps to implement an ISO-9000 quality program that will allow sales of calibration and reference standards into Canada and the European Union. Improvements in general economic conditions and this new quality certification are expected to strengthen sales in this segment.

*Radiological Services.* Revenues from the radiological services segment for the three-month period ended June 30, 2010, were \$57,876, compared to \$154,600 for the same period in 2009, a decrease of \$96,724 or approximately 63%. Gross profit for this segment for the three-month period ended June 30, 2010 was \$36,861, and \$147,646 for the same period in 2009, or 64% and 96% of radiological services segment revenue, respectively. Operating expense for this segment for the three months ended June 30, 2010, was \$10,124, as compared to \$51,645 for the same period in 2009. This decrease is due to economizing on all costs in this segment until such time as the gemstone processing market, the principal market for our radiological services segment, resumes historical activity. Net income for this segment for the three-month period ended June 30, 2010 was \$26,737, as compared to \$96,001 for the same period in 2009. The decrease of \$69,264, or 72%, was due to decreases in revenue for both gemstone processing and radiological services consulting. Most of our radiological services are performed in support of gemstone processing for Quali-Tech, Inc. There are very few companies in the U.S. that possess the mix of qualifications and licensing necessary to provide this type of service, and although the volume of gemstones has not been at historical proportions, management anticipates volume will resume as economic conditions improve.

*Fluorine Products.* There were no revenues to report from the fluorine products segment for the three-month period ended June 30, 2010, or for the same period in 2009. 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 2010, we plan 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. We are also in discussions with customers for the production and sale of germanium tetrafluoride, which would be produced in the Idaho FEP facility in conjunction with the testing and analytical activities.

*Transportation Services.* Revenues from the transportation services segment for the three-month period ended June 30, 2010, were \$52,900, compared to \$90,232 for the same period in 2009. This is a decrease of \$37,332, or approximately 41%. This decrease in revenue is largely due to fewer opportunities for “for hire” transportation services. Gross profit for this segment was \$39,481 for the three-month period ended June 30, 2010, and \$65,019 for the same period in 2009, or 75% and 72%, respectively, of transportation segment revenue for these periods. Operating expense for this segment was \$61,906 for the three-month period ended June 30, 2010, and \$61,560 for the same period in 2009. This represents an increase of \$346 or less than 1%. This slight increase in expense is the result of management’s on-going efforts to control operating costs in this segment. For the three-month period ended June 30, 2010, the transportation services segment reported a net loss of \$22,775, as compared to net income of \$2,938 for the same period in 2009. The transportation services 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 its products and produces a small revenue stream by providing transportation of products for other companies. It is anticipated that this segment will also provide some of the transportation services for the planned de-conversion facility.

*Six months ended June 30, 2010, and 2009*

Revenues for the six-month period ended June 30, 2010, were \$2,594,844, as compared to \$3,185,269 for the same period in 2009, a decrease of \$590,425 or approximately 19%. The Company recorded no bulk cobalt sales for the six-month period ended June 30, 2010, but recorded \$494,661 of bulk cobalt sales during the same period in 2009. 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.

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.

Sale of Product	Six months ended June 30,			
	2010	2009	Increase (Decrease)	% Change
Radiochemical Products	\$ 848,660	\$ 747,666	100,994	14%
Cobalt Products <b>(including bulk cobalt sales)</b>	646,262	1,114,039	(467,777)	-42%
Nuclear Medicine Standards	917,039	955,099	(38,060)	-4%
Radiological Services	105,533	234,953	(129,420)	-55%
Flourine Products	-	878	(878)	-100%
Transportation	77,350	132,634	(55,284)	-42%
Total Segments	2,594,844	3,185,269	(590,425)	-19%
Corporate revenue	-	-	-	-
Total Consolidated	\$ 2,594,844	\$ 3,185,269	(590,425)	-19%

Sale of Product	Six months ended June 30,			
	2010	2009	Increase (Decrease)	% Change
Radiochemical Products	\$ 848,660	\$ 747,666	100,994	14%
Cobalt Products <b>(excluding bulk cobalt sales)</b>	646,262	619,378	26,884	4%
Nuclear Medicine Standards	917,039	955,099	(38,060)	-4%
Radiological Services	105,533	234,953	(129,420)	-55%
Flourine Products	-	878	(878)	-100%
Transportation	77,350	132,634	(55,284)	-42%
Total Segments	2,594,844	2,690,608	(95,764)	-4%
Corporate revenue	-	-	-	-
Total Consolidated	\$ 2,594,844	\$ 2,690,608	(95,764)	-4%

Gross profit for the six-month period ended June 30, 2010 was \$1,112,601, compared to \$1,669,792, for the same period in 2009. This represents a decrease of \$557,191, or approximately 34%. This decrease in gross profit for the six-month period is attributable to reporting no bulk cobalt sales for the six-month period in 2010, as compared to reporting \$494,661 of bulk cobalt sales for the same period in 2009. Gross profit for the six-month period ended June 30, 2009, excluding bulk cobalt sales was \$1,175,131, as compared to \$1,112,601 in 2010, a decrease of \$62,530 or approximately 5%.

Operating expenses were \$3,837,049 for the six-month period ended June 30, 2010, compared to \$2,997,908 for the same period in 2009. This represents an increase of \$839,141 or approximately 28%. 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:

	Six Months ended June 30,	
	2010	2009
Operating costs and expenses:		
Salaries and contract labor	967,876	1,055,088
General, administrative and consulting	850,203	889,514
Research and development	2,018,970	1,053,306
Total operating expenses	3,837,049	2,997,908

Our net loss for the six-month period ended June 30, 2010, was \$2,971,932, as compared to \$1,346,561 for the same period in 2009. This is an increase in loss of \$1,625,371, or 121%, 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, 2010, were \$848,660, compared to \$747,666 for the same period in 2009. This represents an increase in revenue of \$100,994, or approximately 14%. 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, 2010, was \$146,164, compared to \$192,342 for the same period in 2009. Gross profit percentages for the six months ended June 30, 2010 and 2009 were approximately 17% and 25%, respectively. This decrease in gross profit reflects the period-to-period increase in sales coupled with increases in the cost of materials, such as iodine-131, as well as increased freight and shipping costs. Operating expense for this segment for the six-month period ended June 30, 2010, was \$68,614 as compared to \$96,638 for the same period in 2009. This is a decrease of \$28,024, or 29%, and is the result of management's on-going efforts to reduce operating expenses. Net income for this segment decreased for the six-month period ended June 30, 2010, to \$77,550, a decrease of \$18,154, or approximately 19%, as compared to net income of \$95,704 for the same period in 2009. We intend to increase pricing of radiochemical products in the second half of 2010 and have implemented alternate shipment methods, which we expect will increase revenues and reduce costs in this segment.

*Cobalt Products.* Revenues from the sale of cobalt products for the six-month period ended June 30, 2010, were \$646,262, compared to \$1,114,039 for the same period in 2009. This represents a decrease in revenue of \$467,777, or approximately 42%. This decrease 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 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. Excluding bulk cobalt sales, total cobalt product sales increased to \$646,262 for the six months ended June 30, 2010, as compared to \$619,378 for the same period in 2009. This is an increase of \$26,884, or approximately 4%. This slight increase in sales, excluding bulk cobalt sales, reflects the on-going marketing efforts of cobalt products into new markets. Gross profit for the six-month period ended June 30, 2010 was \$383,801, as compared to \$690,455 for the same period in 2009. This decrease in gross profit is primarily the result of reporting no bulk cobalt sales for this period in 2010 as compared to reporting \$494,661 in bulk cobalt sales for the six months ending June 30, 2009. Operating expense in this segment increased by \$22,106, to \$120,459 for the six-month period ended June 30, 2010, from \$98,353 for the same period in 2009. This is an increase of approximately 22% and is the result of increases in operating supplies and indirect labor charges for this six-month period ended June 30, 2010, as compared to the same period in 2009. Net income for the six months ended June 30, 2010 was \$263,343, as compared to \$592,102 for the same period in 2009. This decrease of \$328,759, or approximately 56%, is attributable to reporting no bulk cobalt sales for the six-month period ended June 30, 2010, as compared to reporting \$494,661 in bulk cobalt sales for the same period in 2009.

*Nuclear Medicine Standards.* Revenues from nuclear medicine products for the six-month period ended June 30, 2010, were \$917,039, compared to \$955,099 for the same period in 2009. This is a decrease in revenue of \$38,060, or approximately 4%. Gross profit for this segment for the six-month period ended June 30, 2010, was \$460,080, as compared to \$471,319 for the same period in 2009, or 51% and 49% of nuclear medicine segment

sales, respectively. Operating expense for this same period decreased to \$63,476 for 2010, from \$64,418 in 2009, a decrease of \$942, or approximately 2%. Net income for the nuclear medicine products segment decreased \$10,298, or approximately 3% for the period ended June 30, 2010, as compared to the same period in 2009. Based on discussions with a major customer, management believes revenues and net income for this segment will improve during the second half of 2010, as customers resume purchases of nuclear medicine products that were previously postponed because of economic considerations.

*Radiological Services.* The radiological services segment reported revenues of \$105,533 for the six-month period ended June 30, 2010 and \$234,953 for the same period in 2009. This is a decrease of \$129,420, or approximately 55%. Gross profit was \$62,386 for this segment for the six months ended June 30, 2010 and \$213,812 for the same period in 2009. This is a decrease in gross profit of \$151,426, or approximately 71%. Operating costs were \$26,960 and \$58,702 for 2010 and 2009, respectively, for the same six-month period. Net income for the period ended June 30, 2010 was \$35,427, compared to \$155,108 for the same period in 2009. The overall decrease in both revenue and expenses for this business segment is due to the decrease in gemstone processing as well as decreases in radiological services consulting. Most radiological services are performed in connection with gemstone processing which, due to decreased demand, has slowed significantly which management believes is due to global economic trends in general.

*Fluorine Products.* Revenues from the fluorine products segment for the six-month period ended June 30, 2010, were \$0 and \$878 for the same period in 2009. 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. Based on market studies, we believe that continued financial investment in the uranium de-conversion facility is justified, and will continue to invest in this project throughout the remainder of 2010. The FEP facility in Idaho continues to be used for testing individual components and analytical processes required for the planned uranium de-conversion facility in New Mexico.

*Transportation Services.* Revenues from the transportation services segment for the six-month period ended June 30, 2010, were \$77,350 compared to \$132,635 for the same period in 2009. This is a decrease of \$55,285, or approximately 42% and is largely the result of decreased “for hire” revenues. Gross profit for this segment was \$60,170 for the six-month period ended June 30, 2010, and \$100,987 for the same period in 2009. This is a decrease in gross profit of \$40,817, or approximately 41%. Operating expense for this segment was \$110,387 for the six-month period ended June 30, 2010, and \$115,795 for the same period in 2009. This represents a decrease of \$5,408 or approximately 5%. 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.

## LIQUIDITY AND CAPITAL RESOURCES

On June 30, 2010, we had cash and cash equivalents of \$1,192,310. For the six months ended June 30, 2010, net cash used in operating activities was \$2,108,837. Use of cash in operating activities is a combination of typical operating purchases, including inventory purchases, as well as an increase in accounts receivable.

Inventories at June 30, 2010 totaled \$1,920,851, and inventories at December 31, 2009, totaled \$1,835,345. 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 70% of total inventory cost for the period ended June 30, 2010, and approximately 75% of total inventory cost for the similar period in 2009. In December of 2009, it was determined that some cobalt target material had decreased in activity level and was written down to its estimated market value. We recorded an impairment charge of \$740,719 at that time. Further impairments are not anticipated.

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, 2010, we used \$166,046 in investing activities. This use of funds was primarily attributable to increasing the amount held in a restricted certificate of deposit by \$161,353 as part of our financial assurance obligations under our NRC license. As a condition of our NRC licenses in Idaho, we are required to provide financial assurance for decommissioning activities. We fulfill this license requirement with an actual cash reserve, in the form of a certificate of deposit and irrevocable letter of credit to the NRC, to support our estimated decommissioning and disposal costs for our facilities. Financing activities provided \$3,006,102 during the six months ended June 30, 2010, which was the result of issuing convertible debentures yielding cash proceeds of \$3,075,000 during the first quarter of 2010.

At June 30, 2010, we had two outstanding loans with Compass Bank. One loan carries an outstanding balance of \$52,978, with an interest rate of 9.25%, and matures September 15, 2011. The second loan, matures April 20, 2011, and has an outstanding balance of \$445,593, with an interest rate of 7.25%. 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 are continuing to pursue the planning, licensing and construction of a depleted uranium de-conversion and fluorine extraction processing facility. We spent approximately \$2,025,000 during the first six months of 2010 on this project, and anticipate this spending level to continue through the remainder of 2010. In 2009, we produced the Conceptual Design Report for the project and submitted the license application and required environmental report for the Nuclear Regulatory Commission license application. In the first half of 2010, we continued to support the licensing process with the NRC, completed additional facility design, worked on the transfer of property for the facility, and continued to work towards completing sales agreements for the sale of products from the proposed facility. We are exploring several options for funding of the project at this time including a loan guarantee under the Department of Energy loan guarantee program solicitation for renewable energy, energy savings in manufacturing projects.

We have a long term investment of \$1,290,000, which is 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.

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.

At June 30, 2010 there were 25,940,637 outstanding warrants to purchase common stock. Included in these are 13,333,331 Class E warrants outstanding which entitle the holder to purchase shares of common stock at an exercise price equal to \$0.51 per share. These Class E warrants were issued in 2008 and expire on March 20, 2011. In November 2008, 8,200,000 Class F warrants were issued with an exercise price of \$0.30 per share and an expiration date of November 7, 2013. In September 2009, the Company issued 4,407,306 Class G warrants with an exercise price of \$.40 per share. These Class G warrants expire on September 16, 2011.

### **ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

We are a smaller reporting company as defined by Rule 12b-2 of the Securities Exchange Act of 1934 and are not required to provide the information under this item.

### **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 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, 2010, 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, 2010.

## **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, 2010, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## **PART II. OTHER INFORMATION**

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

None

### **Item 6. Exhibits**

- 3(i) Restated Articles of Incorporation as amended.
- 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 Employment Agreement, by and between International Isotopes Inc. and Stephen Laflin dated as of May 31, 2010 (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K filed on June 23, 2010).\*
- 10.2 Work For Others Agreement by and between International Isotopes Inc. and Battelle Energy Alliance, LLC dated July 31, 2010 (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K filed on August 3, 2010).
- 10.3 Sales Agreement effective August 1, 2010 by and between International Isotopes Idaho, Inc. and NTP Radioisotopes (Pty) Ltd.\*\*
- 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.

\* This exhibit constitutes a management contract or compensatory plan or arrangement

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

## SIGNATURES

In accordance with the requirements of the Exchange Act the registrant caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

International Isotopes Inc.  
(Registrant)

By: /s/ Steve T. Laflin

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Steve T. Laflin  
President and Chief Executive Officer

By: /s/ Laurie McKenzie-Carter

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Laurie McKenzie-Carter  
Chief Financial Officer

Date: August 16, 2010

## EXHIBIT INDEX

Exhibit Number	Description of Document
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\* This exhibit constitutes a management contract or compensatory plan or arrangement

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

**Exhibit 31.1**  
**CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES OXLEY ACT**  
**OF 2002**

I, Steve T. Laflin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of International Isotopes, Inc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 (e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15 (f) and 15d-15 (f)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the

effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

- (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 16, 2010

/s/ Steve T. Laflin  
Steve T Laflin, Chief Executive Officer

**Exhibit 31.2**

**CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES OXLEY ACT OF 2002**

I, Laurie McKenzie-Carter, certify that:

1. I have reviewed this quarterly report on Form 10-Q of International Isotopes, Inc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 (e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15 (f) and 15d-15(f)) for the registrant and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the

effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

- (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 16, 2010

/s/ Laurie McKenzie-Carter  
Laurie McKenzie-Carter, Chief Financial Officer

**Exhibit 32.1**

**CERTIFICATION PURSUANT TO SECTION 906  
OF THE SARBANES OXLEY ACT OF 2002**

In connection with the Quarterly Report of International Isotopes, Inc and subsidiaries (the “Company”) on Form 10-Q for the period ended June 30, 2010, as filed with the Securities and Exchange Commission (the “Form 10-Q”), I, Steve T. Laflin, Chief Executive Officer of the Company, in my capacity as such, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) To my knowledge, the Form 10-Q fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (15 U.S.C. 78m or 78o(d)); and
- (2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

August 16, 2010

/s/ Steve T. Laflin  
Steve T. Laflin  
Chief Executive Officer

**Exhibit 32.1**

**CERTIFICATION PURSUANT TO SECTION 906  
OF THE SARBANES OXLEY ACT OF 2002**

In connection with the Quarterly Report of International Isotopes, Inc and subsidiaries (the “Company”) on Form 10-Q for the period ended June 30, 2010, as filed with the Securities and Exchange Commission (the “Form 10-Q”), I, Laurie McKenzie-Carter, Chief Financial Officer of the Company, in my capacity as such, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) To my knowledge, the Form 10-Q fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (15 U.S.C. 78m or 78o(d)); and
- (2) The information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

August 16, 2010

/s/ Laurie McKenzie-Carter

Laurie McKenzie-Carter  
Chief Financial Officer