

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 September 30, 2009

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 November 12, 2009 the number of shares of Common Stock, \$.01 par value, outstanding was 293,348,473.

INTERNATIONAL ISOTOPES INC.

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Part I. Financial Information  
Item 1. Financial Statements

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES  
Unaudited Condensed Consolidated Balance Sheets

Assets	September 30, 2009	December 31, 2008
<b>Current assets</b>		
Cash and cash equivalents	\$ 1,098,123	\$ 2,149,340
Accounts receivable	597,222	521,908
Inventories	2,704,028	2,518,254
Prepays and other current assets	167,192	117,621
Total current assets	<u>4,566,565</u>	<u>5,307,123</u>
<b>Long-term assets</b>		
Restricted certificate of deposit	263,898	260,517
Property, plant and equipment, net	2,584,469	2,748,023
Capitalized lease disposal costs, net	72,430	86,974
Investment	1,290,000	1,290,000
Patents and other intangibles, net	257,990	247,682
Total long-term assets	<u>4,468,787</u>	<u>4,633,196</u>
Total assets	<u>\$ 9,035,352</u>	<u>\$ 9,940,319</u>
<b>Liabilities and Stockholders' Equity</b>		
<b>Current liabilities</b>		
Accounts payable	\$ 760,040	\$ 430,457
Accrued liabilities	331,952	348,427
Deferred revenue	104,250	102,814
Current installments of capital leases	36,041	33,149
Current installments of notes payable	117,224	580,759
Total current liabilities	<u>1,349,507</u>	<u>1,495,606</u>
<b>Long-term liabilities</b>		
Obligation for lease disposal costs	275,380	261,721
Notes payable, excluding current installments	1,003,261	930,493
Capital leases, excluding current installments	19,586	46,991
Mandatorily redeemable convertible preferred stock	850,000	850,000
Total long-term liabilities	<u>2,148,227</u>	<u>2,089,205</u>
Total liabilities	<u>3,497,734</u>	<u>3,584,811</u>
<b>Stockholders' Equity</b>		
Common stock, \$0.01 par value; 500,000,000 shares authorized; 293,314,191 and 288,625,708 shares issued and outstanding respectively	2,933,142	2,886,257
Additional paid-in capital	100,179,355	98,188,924
Accumulated deficit	<u>(97,574,879)</u>	<u>(94,719,673)</u>
Total stockholders' equity	<u>5,537,618</u>	<u>6,355,508</u>
Total liabilities and stockholders' equity	<u>\$ 9,035,352</u>	<u>\$ 9,940,319</u>

See accompanying notes to condensed consolidated financial statements.

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

	Three Months ended September 30,		Nine Months ended September 30	
	2009	2008	2009	2008
Sale of product	\$ 1,323,907	\$ 1,245,164	\$ 4,509,176	\$ 4,429,144
Cost of product	859,479	647,882	2,374,956	2,182,789
Gross profit	464,428	597,282	2,134,220	2,246,355
Operating costs and expenses:				
Salaries and contract labor	478,207	510,908	1,533,295	1,531,385
General, administrative and consulting	622,603	806,888	1,512,117	2,087,470
Research and development	856,154	6,470	1,909,460	28,588
Total operating expenses	1,956,964	1,324,266	4,954,872	3,647,443
Operating loss	(1,492,536)	(726,984)	(2,820,652)	(1,401,088)
Other income (expense):				
Other income	9,144	16,951	46,460	37,353
Interest income	3,918	6,578	11,593	19,934
Interest expense	(29,171)	(35,706)	(92,607)	(108,014)
Total other expense	(16,109)	(12,177)	(34,554)	(50,727)
Net loss	\$ (1,508,645)	\$ (739,161)	\$ (2,855,206)	\$ (1,451,815)
Net loss per common share - basic and diluted	\$ (0.01)	\$ (0.00)	\$ (0.01)	\$ (0.01)
Weighted average common shares outstanding - basic and diluted	289,636,523	280,402,224	289,103,195	273,051,820

See accompanying notes to condensed consolidated financial statements.

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES			
Unaudited Condensed Consolidated Statements of Cash Flows			
		Nine Months ended September 30,	
		2009	2008
Cash flows from operating activities:			
Net loss		\$ (2,855,206)	\$ (1,451,815)
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation and amortization		309,997	294,631
Loss on disposal of property, plant and equipment		2,756	-
Accretion of obligation for lease disposal costs		13,659	18,184
Equity based compensation		709,122	267,925
Changes in operating assets and liabilities:			
Accounts receivable		(75,314)	(109,064)
Prepays and other assets		(49,571)	(56,311)
Deferred revenue		1,436	-
Inventories		(185,774)	(49,026)
Accounts payable and accrued liabilities		340,668	103,885
Net cash used in operating activities		<u>(1,788,227)</u>	<u>(981,591)</u>
Cash flows from investing activities:			
Restricted certificate of deposit		(3,381)	(73,830)
Purchase of patents		-	(30,466)
Proceeds from sale of property, plant and equipment		5,400	-
Purchase of patents, property, plant and equipment		(150,363)	(1,124,099)
Net cash used in investing activities		<u>(148,344)</u>	<u>(1,228,395)</u>
Cash flows from financing activities:			
Proceeds from exercise of warrants		-	2,799,997
Proceeds from sale of stock		959,881	42,110
Proceeds from issuance of debt		26,769	-
Principal payments on notes payable and capital leases		(101,296)	(93,647)
Net cash provided by financing activities		<u>885,354</u>	<u>2,748,460</u>
Net (decrease) increase in cash and cash equivalents		(1,051,217)	538,474
Cash and cash equivalents at beginning of period		2,149,340	121,887
Cash and cash equivalents at end of period		<u>\$ 1,098,123</u>	<u>\$ 660,361</u>
Supplemental disclosure of cash flow activities:			
Cash paid for interest		<u>\$ 108,094</u>	<u>\$ 124,818</u>
Supplemental disclosure of noncash transactions:			
Conversion of note \$340,753 and interest of \$41,439 to common stock		<u>\$ 382,192</u>	<u>\$ -</u>
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		<u>\$ 13,877</u>	<u>\$ -</u>
Increase in lease disposal costs		<u>\$ -</u>	<u>\$ 18,535</u>
Acquisition of interest in RadQual LLC in exchange for issuance of 1,370,753 shares of stock.		<u>\$ -</u>	<u>\$ 960,000</u>
See accompanying notes to condensed consolidated financial statements.			

INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES  
Notes to Unaudited Condensed Consolidated Financial Statements

(1) The Company and Basis of Presentation

International Isotopes Inc. (the “Company”) was incorporated in Texas in November 1995. The consolidated financial statements include all the accounts of the Company and its 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 consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries International Isotopes Idaho Inc., International Isotopes Fluorine Products Inc., and International Isotopes Transportation Services Inc. 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 for interim financial information and pursuant to the rules and regulations of the Securities and Exchange Commission. Accordingly, they do not include all of the information and notes required by accounting principles generally accepted in the United States of America 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 nine month periods ending September 30, 2009, are not necessarily indicative of the results that may be expected for the year ending December 31, 2009. The accompanying financial statements should be read in conjunction with the Company’s most recent audited financial statements.

Research and Development – For the three and nine months ended September 30, 2009, 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 30, 2009; consequently, the year to date information has been reclassified to report these costs as if they had been previously reported as research and development expense.

## Recent Accounting Pronouncements

In September 2006, the FASB issued a new accounting standard which establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosures about fair value measurements. The new standard was effective for the Company as of January 1, 2008. In February 2008, the FASB issued a new standard which extended the effective date to fiscal years beginning after November 15, 2008. Adoption of this standard did not cause a material change in financial position or results of operations.

In December 2007, the FASB issued a new standard which requires an acquirer to measure the identifiable assets acquired, the liabilities assumed and any non-controlling interest in the acquiree at their fair values on the acquisition date, with goodwill being the excess value over the net identifiable assets acquired. The FASB also issued a second new standard which seeks to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements by establishing accounting and reporting standards for the noncontrolling interest in a subsidiary and for the deconsolidation of a subsidiary. These two new standards were effective for fiscal years beginning on or after December 15, 2008. The adoption of these standards did not have a material effect on the Company's financial position or results of operations.

In April 2009, the FASB issued a new staff position, to require an entity to provide disclosures about fair value of financial instruments in interim financial information. The staff position also amends a previous accounting standard to require those disclosures about the fair value of financial instruments in summarized financial information at interim reporting periods. Under the new staff position, the Company will be required to include disclosures about the fair value of its financial instruments whenever it issues financial information for interim reporting periods. In addition, the Company will be required to disclose in the body or in the accompanying notes of its summarized financial information for interim reporting periods and in its financial statements for annual reporting periods, the fair value of all financial instruments for which it is practicable to estimate that value, whether recognized or not recognized in the statement of financial position. The staff position is effective for periods ending after June 15, 2009 and the adoption of this standard did not have a material impact on the Company's financial position or results of operations.

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. The new standard was effective for interim and annual periods ending after June 15, 2009. The adoption of this standard did not have a material effect on the Company's financial position or results of operations.

## (2) Current Developments and Liquidity

Business Condition – Since inception, the Company has suffered substantial losses. During the nine-month period ended September 30, 2009, the Company had a loss of \$2,855,206 and operations used cash of \$1,788,227. During the same period in 2008, the Company had a loss of \$1,451,815 and operations used cash of \$981,591. The Company believes that continued growth in its current business segments will continue to improve revenue and cash flow for the Company. However, the Company will continue to invest in the design and licensing of a large scale uranium de-conversion and fluorine extraction facility. Management expects to generate sufficient cash flows from the existing business segments to meet operational needs during 2009; however, there is no assurance that these cash flows will occur. In addition, the Company will likely require additional capital to support ongoing efforts to expand the Company business to include the envisioned large scale uranium de-conversion processing and fluorine

extraction plant. Site studies as well as initial design and licensing activities for this new facility will continue through the remainder of 2009.

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

At September 30, 2009, and 2008, 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:

	September 30,	
	<u>2009</u>	<u>2008</u>
Stock options	27,080,000	18,780,000
Warrants	25,940,637	13,333,331
Restricted stock awards issued under the 2006 Equity Incentive Plan	994,850	-
850 shares of Series B redeemable convertible preferred stock	<u>425,000</u>	<u>425,000</u>
	<u><u>54,440,487</u></u>	<u><u>32,538,331</u></u>

### (4) Investments

At September 30, 2009, the Company owned a 24.5% interest in RadQual, LLC, with which the Company has an exclusive manufacturing agreement for nuclear medicine products. The Company accounts for this investment at cost and has recorded \$1,290,000 as an investment. At September 30, 2009, and December 31, 2008, the Company had receivables from RadQual, LLC in the amount of \$461,160 and \$399,140 respectively, which are recorded as part of accounts receivable. For the nine months ended September 30, 2009 and 2008, the Company had revenues from RadQual, LLC in the amount of \$2,442,240 and \$2,308,086 respectively, which are recorded as part of sale of product.

### (5) Inventories

Inventories consist of the following at September 30, 2009, and December 31, 2008:

	<u>September 30, 2009</u>	<u>December 31, 2008</u>
Raw materials	\$ 251,058	\$ 256,576
Work in progress	<u>2,452,970</u>	<u>2,261,678</u>
	<u><u>\$ 2,704,028</u></u>	<u><u>\$ 2,518,254</u></u>

### (6) Notes Payable

In April 2009, the Company renewed a promissory note with Compass Bank. The new note bears interest at 7.25%, requires monthly installments of \$9,090 and matures in April 2011. At September 30, 2009, the outstanding balance on the note was \$501,374.

In September 2009, a portion of an unsecured note payable was converted into equity. The conversion was deemed a partial prepayment of principal and accrued interest under the original note. The terms and conditions of the original note remain in full force and effect with a stated annual interest rate of 7% on any unpaid principal balance and interest payments due each April 1<sup>st</sup>. The amount of principal converted was \$340,753 and the amount of accrued interest converted was \$41,439. The principal amount remaining on the note after the conversion is \$500,000. The note conversion was pursuant to an Unsecured Note Conversion dated September 18, 2009, wherein the note was reduced by the conversion amount and 1,273,972 units consisting of one share of Common Stock, par value \$0.01 per share, and one Class G Warrant to purchase an underlying share of Common Stock for a purchase price equal to \$0.40 per share, were issued.

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

### Employee Stock Purchase

During the nine months ended September 30, 2009, the Company issued 109,557 shares of common stock to employees for proceeds of \$19,881. Subsequent to September 30, 2009, the Company issued 34,282 shares of common stock to employees for proceeds of \$7,285. All of these shares were issued in accordance with the Company's employee stock purchase plan.

### Stock-based Compensation Plans

Employee/Director Grants - The Company accounts for issuances of stock-based compensation to employees under the provisions of Generally Accepted Accounting Principles (GAAP). GAAP requires the recognition of the cost of employee services received in exchange for an award of equity instruments in the financial statements and is measured based on the grant date fair value of the award. GAAP also requires the stock option compensation expense to be recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period).

During May 2009, the Company issued 7,500,000 options to officers and directors under the 2006 Equity Incentive Plan. The options have an exercise price of \$0.32 per share, vest 25% on the first anniversary of the grant date and 25% after each additional one-year period of continuous service and expire 10 years from the date of grant. These options had a fair value of \$1,743,898 or \$0.23 per share as estimated on the date of grant using the Black-Scholes option pricing model with the following weighted average assumptions: risk free interest rate of 2.37%, expected dividend yield of 0%, expected volatility of 84.03% and an expected life of 6.25 years.

Non-Employee Grants - The Company accounts for its issuances of stock-based compensation to non-employees for services using the measurement date guidelines enumerated under Generally Accepted Accounting Principles. Accordingly, the value of any awards that were vested and non-forfeitable at their date of issuance were measured 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. The fair value of the stock options granted was calculated using the Black-Scholes option pricing model.

During May 2009, the Company issued 800,000 non-employee options under the 2006 Equity Incentive Plan. The options were issued to individuals providing consulting services for the depleted uranium de-conversion facility. These options have an exercise price of \$0.32 per share, vest 20% on the first and

second anniversary of the grant date and 30% per year thereafter and expire in May 2019. The options had a grant date fair value of \$182,202 or \$0.23 per share as calculated using the Black-Scholes option pricing model. In accordance with GAAP, these options will be revalued using the Black-Scholes option pricing model each reporting period.

At September 30, 2009, the Company had 1,200,000 options outstanding to non-employees with a fair value of \$583,945 or \$0.49 per share as estimated using the Black-Scholes option pricing model with the following weighted average assumptions: risk free interest rate of 2.93%, expected dividend yield of 0%, expected volatility of 84.10% and an expected life of 5.95 years.

Option awards outstanding as of December 31, 2008, and September 30, 2009, and changes during the nine months ended September 30, 2009, were as follows:

		Weighted Average Exercise Price	Weighted Average Remaining Term	Aggregate Intrinsic Value
Fixed Options	Shares			
Outstanding at December 31, 2008	18,780,000	\$ 0.09		
Granted	8,300,000	0.32		
Exercised	-	-		
Forfeited	-	-		
Outstanding at September 30, 2009	<u>27,080,000</u>	0.16	5.7	\$13,832,000
Exercisable at September 30, 2009	<u>17,880,000</u>	0.06	3.7	\$11,132,000

The intrinsic value of outstanding and exercisable shares is based on a September 30, 2009, closing price of the Company's common stock of \$0.68 per share.

As of September 30, 2009, there was approximately \$1,792,472 of unrecognized compensation cost related to stock options that will be recognized over a weighted average period of 2.26 years.

Restricted Stock Grants - During January 2009, the Company granted 1,243,563 shares of restricted stock to certain employees as part of their annual performance award and incentive under the 2006 Equity Incentive Plan. Each restricted stock award was 20% vested on the date of grant and an additional 20% of the award will vest on each anniversary thereof until fully vested. The restricted stock awards had a grant date fair value of \$223,841. At the time of grant 20% of the shares, or 248,713 shares, were vested. Simultaneously, at the request of employees, 77,091 shares were withheld to pay taxes on deemed employee compensation.

Restricted stock awards outstanding as December 31, 2008, and September 30, 2009, and changes during the nine months ended September 30, 2009, were as follows:

Restricted Stock Awards	Shares
Non-vested at December 31, 2008	-
Granted	1,243,563
Vested	248,713
Forfeited	-
Non-vested at September 30, 2009	994,850

The value of non-vested stock under the 2006 Equity Incentive Plan at September 30, 2009 is \$676,498 and is based on a September 30, 2009 value of \$0.68 per share. As of September 30, 2009, there was approximately \$91,827 of unamortized deferred compensation that will be recognized over a weighted average period of 2 years.

Compensation expense charged against income for stock based awards during the nine-month period ended September 30, 2009, was \$709,122, of which \$568,991 is included in general and administrative expense and \$140,131 is included in research and development expense. Stock based compensation expense for this same period in 2008 was \$267,925 and is included in general and administrative expense in the accompanying financial statements.

Warrants - The stated exercise price of the Class E Warrants was recalculated to reflect a decrease in average closing price since the previous anniversary date. The Class E Warrants were issued April 9, 2008 with a stated exercise price of \$0.869 and were adjusted according to the warrant terms to an exercise price of \$0.51 calculated as of April 9, 2009. All Class E Warrant holders were notified of the restatement on September 28, 2009.

Private Placement - During September 2009, the Company completed a private placement offering of 4,407,306 units priced at \$0.30 per unit in exchange for cash proceeds of \$940,000 and conversion of certain debt of \$340,753 and accrued interest of \$41,439. Each unit consisted of one share of common stock and one Class G Warrant to purchase a share of common stock at \$0.40 per share. The Class G Warrants have a two year term, expire in 2011, and include a first anniversary price adjustment provision. The proceeds were allocated to the warrants based upon their value of \$1,892,497 and resulted in \$778,379 being allocated to the warrants and \$543,813 allocated to the shares of common stock. 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 3%, expected dividend yield of 0%, expected volatility of 126.93% and an expected life of 2 years. In accordance with the Securities Purchase Agreement, the stock and warrants carry registration rights. A shareholder may demand that the Company Register the securities if they are unable to sell the securities 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 within 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 or may be sold under Rule 144. 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 purchaser or 1% of the market value of the shares then outstanding. Demand for registration has not yet been made.

## (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. The prime operating contractor cannot offer any provision for a long term contract guaranteeing the continued irradiation of HSA Cobalt. Contracting for irradiation and handling of cobalt is conducted in accordance with the DOE's Work for Others (WFO) Non-Government Sponsor programs and subject to the government's determination of space availability and compatibility with the reactors prime operating sponsor's experimental programs. Under a WFO program the Company is required to provide incremental advance funding to cover the cost of labor and irradiation services and these advance payments are periodically reconciled against actual costs. This same contract arrangement has been in place since the Company's inception and consistent irradiation services have been, and are expected to continue to be provided. The discontinuation of our relationship with DOE and its prime operating contractor, or decreased ability on their part to provide irradiation services could adversely affect operating results by causing a delay in production.

Nuclear Medicine Reference and Calibration Standard manufacturing is conducted under an exclusive contract with one of our customers, RadQual, LLC, which in turn has an agreement in place with several companies for distributing the product. The contract states that the Company will manufacture these products exclusively for RadQual LLC and will not manufacture any products that would compete directly 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. The Company has continuously maintained this same basic contractual arrangement with RadQual since 2001. A discontinuation of our relationship with RadQual, LLC could adversely affect operating results by causing a possible loss of sales.

### Contingencies

Because all of the Company's business segments involve radioactive materials the Company is required to have an operating license from the Nuclear Regulatory Commission ("NRC") and specially trained staff to handle these materials. The Company has an NRC operating license and has amended this license several times to increase the amount of material permitted within the facility. Additional processing capabilities and license amendments could be implemented that would permit processing of other reactor produced radioisotopes by the Company but this license does not currently restrict the volume of business operation performed or projected to be performed in the coming year. 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) 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 September 30,		Nine Months ended September 30,	
	2009	2008	2009	2008
Radiochemical Products	\$ 465,805	\$ 348,968	\$ 1,213,471	\$ 1,017,366
Cobalt Products	419,446	240,494	1,533,485	1,390,538
Nuclear Medicine	431,292	487,640	1,386,391	1,399,338
Radiological Services	(31,986)	115,262	202,967	527,532
Flourine Products	-	-	878	-
Transportation	39,350	52,800	171,984	94,370
Total Segments	1,323,907	1,245,164	4,509,176	4,429,144
Corporate revenue	-	-	-	-
Total Consolidated	\$ 1,323,907	\$ 1,245,164	\$ 4,509,176	\$ 4,429,144
Depreciation and Amortization	Three Months ended September 30,		Nine Months ended September 30,	
	2009	2008	2009	2008
Radiochemical Products	\$ 9,866	\$ 11,013	\$ 29,655	\$ 33,665
Cobalt Products	25,621	26,181	77,912	74,681
Nuclear Medicine	1,257	637	3,015	2,329
Radiological Services	2,600	2,600	7,800	5,404
Flourine Products	50,840	48,565	151,879	140,328
Transportation	9,411	4,984	22,303	14,241
Total Segments	99,595	93,980	292,564	270,648
Corporate depreciation and amortization	1,908	7,261	17,433	23,983
Total Consolidated	\$ 101,503	\$ 101,241	\$ 309,997	\$ 294,631
Segment Income (Loss)	Three Months ended September 30,		Nine Months ended September 30,	
	2009	2008	2009	2008
Radiochemical Products	\$ 1,341	\$ 24,092	\$ 97,045	\$ 82,642
Cobalt Products	177,968	153,331	770,070	788,845
Nuclear Medicine	185,871	175,490	592,772	569,357
Radiological Services	(117,402)	75,024	37,706	350,718
Flourine Products	(996,293)	(438,830)	(2,431,391)	(1,037,188)
Transportation	(33,932)	(20,309)	(49,252)	(103,596)
Total Segments	(782,447)	(312,022)	(983,050)	650,778
Corporate loss	(726,198)	(707,959)	(1,872,156)	(2,102,593)
Net Loss	\$ (1,508,645)	\$ (739,161)	\$ (2,855,206)	\$ (1,451,815)
Expenditures for Segment Assets	Three Months ended September 30,		Nine Months ended September 30,	
	2009	2008	2009	2008
Radiochemical Products	\$ -	\$ -	\$ -	\$ -
Cobalt Products	-	-	-	14,171
Nuclear Medicine	-	-	23,531	-
Radiological Services	-	-	-	51,995
Flourine Products	8,147	14,705	45,179	914,706
Transportation	-	5,736	81,653	12,369
Total Segments	8,147	20,441	150,363	1,120,841
Corporate purchases	-	-	-	3,258
Total Consolidated	\$ 8,147	\$ 20,441	\$ 150,363	\$ 1,124,099
Segment Assets	September 30,	December 31,		
	2009	2008		
Radiochemical Products	\$ 331,959	\$ 312,049		
Cobalt Products	3,143,507	3,110,486		
Nuclear Medicine	560,668	439,832		
Radiological Services	47,210	55,042		
Flourine Products	1,941,056	2,044,333		
Transportation	104,215	52,720		
Total Segments	6,128,615	6,014,462		
Corporate assets	2,906,737	3,925,857		
Total Consolidated	\$ 9,035,352	\$ 9,940,319		

## **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; 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, 2008 filed with the securities and Exchange Commission on March 26, 2009. 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-month and nine-month periods ended September 30, 2009, and 2008.*

Revenues for the three and nine-month period ended September 30, 2009, were \$1,323,907 and \$4,509,176 as compared to \$1,245,164 and \$4,429,144 respectively for the same periods in 2008, an increase of \$78,743, or 6%, and \$80,032, or 2%, respectively. The increase in total revenues for the three-month period was attributable to strong performance in both the radiochemical and cobalt business segments. The smaller increase in revenues for the nine-month period is indicative of the steady state of most business segments and reflects current market conditions. Further discussion of the business performance of each business segment is described more fully in the following paragraphs.

Revenues from the sale of radiochemical products for the three-month period ending September 30, 2009, were \$465,805 compared to \$348,968 for the same period in 2008. This represents an increase in revenue of \$116,837, or about 33%. Revenues from the sale of radiochemical products for the nine-month period ending September 30, 2009, were \$1,213,471 compared to \$1,017,366 for the same period in 2008. This represents an increase in revenue of \$196,105, or about 19%. Increases in the segment performance are attributable to increased sales of radiochemical iodine-131. Despite the strong increase in revenues from radiochemical sales, as compared to the prior year, income for this segment only marginally improved for the nine-month period ending September 30, 2009 showing an increase of \$14,403 or approximately 17%, and actually declined for the three-month period ending September 30, 2009, with a decrease in income of \$22,751 or approximately 94%, as compared to similar periods in 2008. Increased shipping cost and changes in the supply contract during the three-month period accounted for an increase in the cost of goods sold of radiochemical products and reduced the segment's net income. Operating expense for the three and nine-month periods ending September 31, 2009 was \$59,894 and \$156,532, respectively, as compared to \$28,510 and \$96,224 for similar periods in 2008. This represents increases in operating expense of 210% and 63%, respectively. The Company has been able to make changes to shipment methods that will reduce costs and return segment income to historic percentages.

Revenues from the sale of cobalt products for the three-month period ending September 30, 2009, were \$419,446 compared to \$240,494 for the same period in 2008. This represents an increase in revenue of \$178,952, or about 74%. Revenues from the sale of cobalt products for the nine-month period ending September 30, 2009, were \$1,533,485 compared to \$1,390,538 for the same period in 2008. This represents an increase in revenue of \$142,947, or about 10%. Increases in the segment performance are attributable to increased sales of several models of sealed sources. There has been steady growth in the sales of these products and this growth is expected to continue based on expanded sales in foreign markets. Since the timing of large bulk cobalt product sales during the course of the calendar year has a significant impact upon period comparisons management has, in the past, excluded sales of bulk cobalt product from period comparisons. However, there were no bulk cobalt sales during the three-month periods ended September 30, 2009 or 2008 that would impact the normal period comparisons and the bulk cobalt sales in 2008 were approximately the same as those in 2009; therefore, excluding bulk cobalt sales from the three and nine month period comparisons in this quarterly report does not provide any useful information to investors. In spite of the 74% and 19% increase in revenue for the segment during the three and nine-month periods ending September 30, 2009, respectively, net income increased only 16% and decreased 2% for the respective periods. An increase in the cost of source transportation and subcontractor expense related to source installations accounts for most of this increased expense. The Company has been working for the past year to develop alternative methods of transport and installation to reduce this expense and expects to see an improvement in this area in 2010.

Revenues from nuclear medicine products for the three-month period ending September 30, 2009 were \$431,292 compared to \$487,640 for the same period in 2008. This represents a decrease in revenue of \$56,348, or 12%. Revenues from nuclear medicine products for the nine-month period ending September 30, 2009 were \$1,386,391 compared to \$1,399,338 for the same period in 2008. This represents a decrease in revenue of \$12,947, or less than 1%. Based on discussions with our major customer, this decrease in revenues for both the three month period and nine-month period ending September 30, 2009 can be attributed to financial pressure and cost cutting measures employed in many medical institutions because of the downturn in the U.S. economy. To a great extent management believes this downturn in nuclear medicine revenue is the result of customers deferring the purchase of reference and calibration standards rather than a cancelation of those necessary purchases altogether. In spite of the decrease in revenue, net income for this segment increased 6% and 4% in the three and nine-month periods respectively. This can be attributed in part to decreases in cost of goods sold of \$53,071 and \$37,951 for the three and nine-month periods ending September 30, 2009, respectively, as compared to similar periods in 2008. The Company will work towards attempting to continue this positive trend in net income.

Revenues from the radiological services segment for the three-month period ending September 30, 2009, were \$(31,986) compared to \$115,262 for the same period in 2008; a decrease of \$147,248 or 127%. Revenues from radiological services segment for the nine-month period ending September 30, 2009, were \$202,967 compared to \$527,532 for the same period in 2008; a decrease of \$324,565 or 62%. The decline in this segment's revenue was largely attributable to a decline in the volume of gemstone processing. Economic conditions continue to have a negative impact upon the gemstone industry which directly affects this segment's performance.

Revenues from fluorine products segment for the three-month periods ending September 30, 2009 and 2008 were \$0. Revenues from the fluorine products segment for the nine-month period ending September 30, 2009 were \$878 compared to \$0 for the same period in 2008. This small amount of revenue resulted from the sale of an initial qualification lot of material to a prospective customer during the first quarter of 2009. The customer verified that while the material met specifications no additional material has been sold due to continued weak market conditions. Since these weak market conditions are expected to continue the

Company has suspended routine production of germanium tetrafluoride and is using the equipment and resources allocated to this business segment to carry out research and development of analytical and production techniques and hardware for the company's planned fluorine production and uranium de-conversion operations.

Revenues from the transportation services segment for the three-month period ending September 30, 2009, were \$39,350 compared to \$52,800 for the same period in 2008. Revenues from the transportation services segment for the nine-month period ending September 30, 2009, were \$171,984 compared to \$94,370 for the same period in 2008. The small changes in revenue for the three month and nine month periods are typical of normal variations in revenues from this segment and not indicative of significant changes in either the sources or amount of revenue in the segment for the foreseeable future.

Gross profit for the three and nine-month periods ended September 30, 2009, was \$464,428 and \$2,134,220 compared to \$597,282 and \$2,246,355 respectively, for the same periods in 2008. This represents a decrease of \$132,854 or 22% for the three-month period ended September 30, 2009, and a decrease of \$112,135 or 5% for the nine-month period ended September 30, 2009. The primary cause of the decrease in gross profit for the three and nine-month periods ending September 30, 2009, is due in large part to a change in purchase price structure with the Company's major radiochemical supplier. These changes amounted to increased product price as well as increases in the related packaging, shipping, and transportation expense. The Company has taken steps to reduce some of these related expenses in subsequent periods by looking into alternate shipping methods and considering changes in packaging configurations that may potentially reduce packaging costs.

Operating expenses increased to \$1,956,964 and \$4,954,872 respectively for the three and nine-month periods ended September 30, 2009, compared to \$1,324,266 and \$3,647,443 respectively for the same periods in 2008. This represents an increase of \$632,698 or 48%, and \$1,307,429 or 36%, for the three and nine-month periods respectively, and is attributable to increases in contract labor, research and development, legal, and salary expense related to engineering design and licensing efforts to support the planned depleted uranium de-conversion and fluorine extraction process facility. Other salaries and contract labor expenses, not related to the planned depleted uranium de-conversion and fluorine extraction process facility, for the three-month period ended September 30, 2009 were \$478,207 as compared to \$510,908 for the same period in 2008 and \$1,533,295 for the nine-month period ended September 30, 2009 as compared to \$1,531,385 for the same nine-month period in 2008. This represents a decrease of \$32,178, or 6%, and an increase of \$1,910, or 0.1% for the three and nine-month periods respectively. The relatively unchanged operations cost is indicative of management control of these operating expenses in 2009.

General administrative and consulting expenses totaled \$622,603 for the three-month period ended September 30, 2009 as compared to \$806,888 for the same period of 2008 and \$1,512,117 for the nine-month period ended September 30, 2009, as compared to \$2,087,470 for the same period in 2008. This represents a decrease of \$184,285, or 23%, and a decrease of \$575,353, or 28% for the three and nine-month periods respectively. Research and development expenses totaled \$856,154 for the three-month period ended September 30, 2009 as compared to \$6,470 for the same period of 2008 and \$1,909,460 for the nine month period ended September 30, 2009, as compared to \$28,588 for the same period in 2008. This represents an increase of \$849,684 and \$1,880,872 for the three and nine-month periods respectively. The development work on the depleted uranium de-conversion and fluorine extraction processing facility has been classified as research and development expense in the accompanying Statement of Operations for the current three and nine-month periods of 2009. It is this reclassification together with an increase in engineering and subcontractor expense that accounts for the changes in general administrative and consulting and research and development and most of the overall increase in total operating expense. These increased expenses are expected to continue as the uranium de-conversion project progresses.

Our net loss for the three and nine-month periods ended September 30, 2009 was \$1,508,645 and \$2,855,206 respectively, compared to a loss of \$739,161 and \$1,451,815 respectively, for the same periods in 2008. This is an increase in loss of \$769,484 for the three months ended September 30, 2009 and an increase in loss of \$1,403,391 for the nine months ended September 30, 2009, and was almost totally attributable to the increases in research and development, as well as other costs related to the planned depleted uranium de-conversion and fluorine extraction processing facility.

Interest expense for the three and nine-month periods ended September 30, 2009, was \$29,171 and \$92,607 respectively, as compared to \$35,706 and \$108,014 respectively, for the same periods in 2008. These decreases for the three and nine-month periods of \$6,535 and \$15,407 respectively, are largely attributable to a loan with Compass Bank which was renewed April 20, 2009, at a lower rate of interest, and less interest being paid out overall as existing loan balances decline over time.

### LIQUIDITY AND CAPITAL RESOURCES

On September 30, 2009, we had cash and cash equivalents of \$1,098,123. For the nine-months ended September 30, 2009, net cash used in operating activities was \$1,788,227. Use of cash in operating activities is a combination of typical operational expenses, including inventory purchases, deferred revenue recorded, and an increase in accounts receivable.

Inventories at September 30, 2009 totaled \$2,704,028 and at September 30, 2008 inventories totaled \$2,518,254. This significant investment in inventory is due to the time required to produce some cobalt products and the Company's operating cycle for those products is considered to be three years. Irradiation costs paid to the Department of Energy's prime contractor account for approximately 78% of total inventories for the period ended September 30, 2009 and approximately 74% of total inventories for the similar period in 2008.

Deferred revenue recorded for the period represents prepayment of cobalt sales not yet shipped, and increases in accounts receivable reflect increased sales for the period. We used \$148,344 for investing activities which is primarily the result of asset purchases. Financing activities provided \$885,354 during the nine months ended September 30, 2009 with the significant contributing factor being the issuance of common stock and Class G Warrants yielding cash proceeds of \$940,000.

At September 30, 2009, the Company had two outstanding loans with Compass Bank. One loan carries an outstanding balance of \$81,994 with an interest rate of 9.25% and matures September 15, 2011. The second loan, which matured March 31, 2009, and was renewed on April 20, 2009, has an outstanding balance of \$501,374 with an interest rate of 7.25%, and matures on April 20, 2011.

In September 2009, \$340,753 of an unsecured note payable totaling \$840,753 was converted into equity leaving a principal balance of \$500,000. The loan requires annual interest payments on the remaining principal balance at 7% per year, payable each April 1st, and matures on April 1, 2012.

The Company has described plans to design, license, and construct a depleted uranium de-conversion and fluorine extraction processing facility. The Company has spent approximately \$2.2 million through the first nine months of 2009 on equipment, labor for research and development and consultant expense for this project and expects to spend an additional estimated amount of \$550,000 on this effort through the remainder of 2009. During 2009, the Company has produced the Conceptual Design Report for the project and is preparing the license application and required environmental report for the Nuclear Regulatory

Commission license application. The total project costs are expected to reach approximately \$75 million over the next three years and the Company is exploring various options of funding the project at this time.

The Company balance sheet lists a long term asset investment of \$1,290,000, which is our 24.5% ownership in shares 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. The Company purchased these shares with the intent to eventually acquire the remaining shares of the company 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 the availability of additional capital to the Company.

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 September 30, 2009, we had 25,940,637 Class E, F and G warrants outstanding.

### **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 has established 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")) 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 reports that are filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's ("SEC") rules and forms. Under the supervision and with the participation of management, including the principal executive officer and principal financial officer an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of September 30, 2009 was completed based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation, the principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures were effective to give reasonable assurance that the information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC.

Although our disclosure controls and internal controls were designed to provide reasonable assurance of achieving their objectives, and our principal executive officer and principal financial officer have determined that our disclosure controls and procedures are effective at doing so, a control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent

limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based partly on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

**Changes in Internal Control over Financial Reporting**

There was no change in the Company’s internal control over financial reporting during the Company’s most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

**PART II. OTHER INFORMATION**

**Item 4. Submission of matters to a vote of Security Holders.**

The Company’s 2009 Annual Meeting of Stockholders (“Annual Meeting”) was held on July 14, 2009, at which time the stockholders voted on the following proposals:

1. Election of directors, each to serve for a term of one year and until their successors are elected and qualified.

	<b>For</b>	<b>Withheld</b>
Steve T. Laflin	206,151,871	208,428
Christopher Grosso	206,303,046	57,253
Ralph M. Richart	206,283,069	77,230

2. Ratification of Hansen, Barnett & Maxwell P.C. as the independent auditors for the fiscal year ending December 31, 2009.

<b>For</b>	<b>Against</b>	<b>Abstain</b>
206,076,179	32,408	251,712

**Item 6. Exhibits**

- 3(i) Second Amended and Restated Articles of Incorporation (incorporated by reference to Appendix C to the Company's definitive proxy statement on Schedule 14A filed on April 28, 2005).
- 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)).
- 4.1 Form of Class E Warrant (incorporated by reference to Exhibit 4.1 of the Company's Current Report of Form 8-K filed on April 21, 2008).

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

**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  
-----  
Steve T. Laflin  
President and Chief Executive Officer

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

Date: November 13, 2009

## EXHIBIT INDEX

<b>Exhibit Number</b>	<b>Description of Document</b>
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32.1	Certification by the Chief Executive and Chief Financial 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 Executive and Chief Financial Officer furnished pursuant to 18 U.S.C. Section 1350 adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

**Exhibit 31.(i)**  
**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
  - (c) 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: November 13, 2009

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

**Exhibit 31.(ii)**  
**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
  - (c) 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: November 13, 2009

/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 September 30, 2009, 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.

November 13, 2009

/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 September 30, 2009, 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.

November 13, 2009

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