

INTERNATIONAL ISOTOPES INC
Form PRE 14A
April 20, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 14A
(Rule 14a-101)
INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

Preliminary Proxy Statement

Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

Definitive Proxy Statement

Definitive Additional Materials

Soliciting Material Pursuant to §240.14a-12

INTERNATIONAL ISOTOPES INC.

(Name of Registrant as Specified in its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

x

No fee required.

..

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

1.

Title of each class of securities to which transaction applies:

2.

Aggregate number of securities to which transaction applies:

3.

Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

4.

Proposed maximum aggregate value of transaction:

5.

Total fee paid:

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Fee paid previously with preliminary materials.

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Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

1.

Amount Previously Paid:

2.

Form, Schedule or Registration Statement No.:

3.

Filing Party:

4.

Date Filed:

INTERNATIONAL ISOTOPES INC.

4137 Commerce Circle

Idaho Falls, Idaho 83401

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

TO BE HELD JULY 17, 2012

NOTICE IS HEREBY GIVEN that the 2012 Annual Meeting of Shareholders will be held at 2:00 p.m., Mountain time, on Tuesday, July 17, 2012, at our offices located at 1359 Commerce Way, Idaho Falls, Idaho 83401, for the following purposes:

1.

To elect three directors to serve for a term of one year and until their successors are elected and qualified;

2.

To ratify the appointment of Hansen, Barnett & Maxwell, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2012;

3.

To approve an amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock; and

4.

To consider any other business that may properly come before the meeting.

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice.

Important Notice Regarding the Availability of Proxy Materials

for the Shareholder Meeting to be Held on July 17, 2012.

This Proxy Statement and our Annual Report to Shareholders are available at:

www.edocumentview.com/INIS.

Adjournments and Postponements

Any action on the items of business described above may be considered at the Annual Meeting at the time and on the date specified above or at any time and date to which the Annual Meeting may be properly adjourned and postponed.

Record Date

You are entitled to vote only if you were a shareholder of International Isotopes Inc. as of the close of business on May 29, 2012.

Voting

Your vote is very important. Whether or not you plan to attend the annual meeting, we encourage you to read the proxy statement and to submit your proxy or voting instructions as soon as possible. You may submit your proxy or voting instructions for the annual meeting by phone, on the internet or completing, signing, dating and returning your proxy card or voting instructions in the pre-addressed envelope provided. For specific instructions on how to vote your shares, please refer to the section entitled *Questions and Answers* beginning on page 1 of the proxy statement and the instructions on the proxy card or voting instruction card. You may attend the meeting in person even though you have sent in your proxy or voting instruction card.

BY ORDER OF THE BOARD OF
DIRECTORS,

/s/ Steve Laflin

Steve T. Laflin

President and Chief Executive Officer

Idaho Falls, Idaho

June 7, 2012

INTERNATIONAL ISOTOPES INC.

4137 Commerce Circle

Idaho Falls, Idaho 83401

PROXY STATEMENT

For Annual Meeting of Shareholders

To Be Held on July 17, 2012

General

The enclosed proxy is solicited on behalf of the Board of Directors (the **Board**) of International Isotopes Inc. (the **Company**, **we**, **us** or **our**) for use at the 2012 Annual Meeting of Shareholders (the **Annual Meeting**) to be held July 17, 2012, at 2:00 p.m., Mountain time, or at any adjournment or postponement thereof, for the purposes set forth herein and in the accompanying Notice of Annual Meeting of Shareholders. The Annual Meeting will be held at our offices located at 1359 Commerce Way, Idaho Falls, Idaho 83401.

This proxy statement and our Annual Report to Shareholders for the fiscal year ended December 31, 2011 are first being distributed on June 7, 2012 to all shareholders entitled to vote at the Annual Meeting.

QUESTIONS AND ANSWERS ABOUT THE PROXY MATERIALS AND THE ANNUAL MEETING

Q:

Why am I receiving these materials?

A:

The Board is providing these proxy materials to you in connection with the Annual Meeting, which will take place on July 17, 2012. As a shareholder, you are invited to attend the Annual Meeting and are entitled to and requested to vote on the items of business described in this proxy statement.

Q:

What information is contained in this proxy statement?

A:

The information included in this proxy statement relates to the proposals to be voted on at the Annual Meeting, the voting process, the compensation of directors and certain executive officers, and certain other required information.

Q:

How may I obtain International Isotopes Annual Report to Shareholders and Form 10-K?

A:

A copy of our 2011 Annual Report (which contains our Form 10-K) is enclosed.

Shareholders may request any exhibit to the Form 10-K for the year ended December 31, 2011 by specifically requesting a copy from our principal executive office at:

International Isotopes Inc.

Attn: Laurie McKenzie-Carter

4137 Commerce Circle

Idaho Falls, Idaho 83401

(208) 524-5300

Copies of the 2011 Annual Report on Form 10-K for the year ended December 31, 2011 are also available in the Investor Center section of our website at www.internationalisotopes.com and at the SEC's EDGAR database on the SEC's website at www.sec.gov.

Q:

What items of business will be voted on at the Annual Meeting?

A:

The items of business scheduled to be voted on at the Annual Meeting are:

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The election of three directors;

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The ratification of Hansen, Barnett & Maxwell, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2012;

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The approval of an amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock; and

To consider any other business that may properly come before the meeting.

Q:

How does the Board recommend that I vote?

A:

Our Board recommends that you vote your shares "FOR" each of the nominees to the Board, "FOR" the ratification of Hansen, Barnett & Maxwell, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2012, and FOR the approval of the amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock.

Q:

What shares can I vote?

A:

Each share of our issued and outstanding common stock as of the close of business on May 29, 2012, the Record Date, is entitled to be voted on all items being voted upon at the Annual Meeting. You are entitled to one vote for each share of common stock you own. You may vote all shares owned by you as of the Record Date, including (1) shares held directly in your name as the shareholder of record, and (2) shares held for you as the beneficial owner through a broker, trustee or other nominee such as a bank. On the Record Date, we had 360,166,420 shares of common stock issued and outstanding.

Q:

What is the difference between holding shares as a shareholder of record and as a beneficial owner?

A:

Most shareholders hold their shares through a broker or other nominee rather than directly in their own name. As summarized below, there are some distinctions between shares held of record and those owned beneficially.

Shareholder of Record

If your shares are registered directly in your name with our transfer agent, Computershare Trust Company, N.A., you are considered, with respect to those shares, the shareholder of record, and these proxy materials are being sent directly to you by us. As the shareholder of record, you have the right to grant your voting proxy directly to us or to vote in person at the Annual Meeting. We have enclosed or sent a proxy card for you to use.

Beneficial Owner

If your shares are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in street name, and these proxy materials are being forwarded to you together with a voting instruction card. As the beneficial owner, you have the right to direct your broker, trustee or nominee how to vote and are also

invited to attend the Annual Meeting.

Since a beneficial owner is not the shareholder of record, you may not vote these shares in person at the meeting unless you obtain a "legal proxy" from the broker, trustee or nominee that holds your shares, giving you the right to vote the shares at the meeting. Your broker, trustee or nominee has enclosed or provided voting instructions for you to use in directing the broker, trustee or nominee how to vote your shares.

Q:

How can I attend the Annual Meeting?

A:

You are entitled to attend the Annual Meeting only if you were a shareholder or joint holder as of the close of business on May 29, 2012, or you hold a valid proxy for the Annual Meeting. You should be prepared to present photo identification for admittance at the Annual Meeting. In addition, if you are a shareholder of record, your name will be verified against the list of shareholders of record on the Record Date prior to your being admitted to the Annual Meeting. If you are not a shareholder of record but hold shares through a broker or nominee (*i.e.*, in street name), you should provide proof of beneficial ownership on the Record Date, such as your most recent account statement prior to the Record Date, a copy of the voting instruction card provided by your broker, trustee or nominee, or other similar evidence of ownership. If you do not provide photo identification or comply with the procedures outlined above upon request, you will not be admitted to the Annual Meeting. The Annual Meeting will begin promptly at 2:00 p.m., Mountain time. If you need directions to the location of the Annual Meeting, please call us at (208) 524-5300.

Q:

How can I vote my shares in person at the Annual Meeting?

A:

Shares held in your name as the shareholder of record may be voted in person at the Annual Meeting. Shares held beneficially in street name may be voted in person only if you obtain a legal proxy from the broker, trustee or nominee that holds your shares giving you the right to vote the shares. Even if you plan to attend the Annual Meeting, we recommend that you also submit your proxy or voting instructions as described below so that your vote will be counted if you later decide not to attend the meeting.

Q:

How can I vote my shares without attending the Annual Meeting?

A:

Whether you hold shares directly as the shareholder of record or beneficially in street name, you may direct how your shares are voted without attending the meeting. If you are a shareholder of record, you may vote by submitting a proxy. If you hold shares beneficially in street name, you may vote by submitting voting instructions to your broker, trustee or nominee. For directions on how to vote, please refer to the instructions below and those included on your proxy card or, for shares held beneficially in street name, the voting instruction card provided by your broker, trustee or nominee.

Shareholders of record of our common stock may submit proxies by:

- (1) Completing, signing and dating their proxy card and mailing them in the accompanying pre-addressed envelope;
- (2) Accessing the Internet Voting Site at www.envisionreports.com/INIS and voting by following the instructions provided on the website; or
- (3) Calling 1-800-652-VOTE (8683) and voting by following the instructions provided on the phone line.

In order to vote via telephone or on the Internet, please have your proxy card in front of you. Your proxy card contains the phone number and website needed to vote. The proxy card will also contain the account number and proxy access number needed to vote via telephone or the Internet. Upon entering either the phone number or Internet address, you will be instructed on how to proceed.

Q:

Can I change my vote?

A:

You may change your vote at any time prior to the vote at the Annual Meeting. If you are the shareholder of record, you may change your vote by granting a new proxy bearing a later date (which automatically revokes the earlier proxy), by providing a written notice of revocation to our Secretary prior to your shares being voted, or by attending the Annual Meeting and voting in person. Attendance at the meeting will not cause your previously granted proxy to be revoked unless you specifically so request. For shares you hold beneficially in street name, you may change your vote by submitting new voting instructions to your broker, trustee or nominee, or, if you have obtained a legal proxy from your broker or nominee giving you the right to vote your shares, by attending the meeting and voting in person.

Q:

Who can help answer my questions?

A:

If you have any questions about the Annual Meeting or how to vote or revoke your proxy, you should contact:

International Isotopes Inc.

Attn: Laurie McKenzie-Carter

4137 Commerce Circle

Idaho Falls, Idaho 83401

(208) 524-5300

Q:

Is my vote confidential?

A:

Proxy instructions, ballots and voting tabulations that identify individual shareholders are handled in a manner that protects your voting privacy. Your vote will not be disclosed either within International Isotopes or to third parties, except: (1) as necessary to meet applicable legal requirements, (2) to allow for the tabulation of votes and certification of the vote, and (3) to facilitate a successful proxy solicitation. Occasionally, shareholders provide written comments on their proxy card, which are then forwarded to our management.

Q:

How many shares must be present or represented to conduct business at the Annual Meeting?

A:

The quorum requirement for holding the Annual Meeting and transacting business is that holders of a majority of shares of our common stock entitled to vote must be present in person or represented by proxy. Abstentions, votes withheld and broker non-votes are counted for the purpose of determining the presence of a quorum.

Q:

How are votes counted?

A:

In the election of directors, you may vote "FOR" all of the nominees or your vote may be "WITHHELD" with respect to one or more of the nominees.

For any other items of business, you may vote "FOR," "AGAINST" or "ABSTAIN." Abstentions and votes withheld have the same effect as a vote "AGAINST." Broker non-votes have no effect. If you provide specific instructions with regard to a certain item, your shares will be voted as you instruct on such items. If you are a shareholder of record and you sign and return your proxy card without giving specific instructions, your shares will be voted in accordance with the recommendations of the Board ("FOR" all of the nominees to the Board, "FOR" ratification of the independent registered public accounting firms, and FOR the approval of an amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock) and in the discretion of the proxy holders on any other matters that properly come before the meeting.

Q:

What is the voting requirement to approve each of the proposals?

A:

Directors are elected by a plurality of the votes cast, provided that a majority of the shares of common stock are present or represented and entitled to vote at the Annual Meeting. The three candidates who receive the greatest number of votes will be elected directors. The ratification of the appointment of our independent registered public accounting firm and the proposal to approve an amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock requires the affirmative vote of a majority of the shares present in person or represented by proxy at the Annual Meeting.

Abstentions are shares that abstain from voting on a particular matter. Abstentions effectively count as being present for purposes of determining whether a quorum of shares is present at a meeting. Abstentions have no effect on Proposal No. 1, election of directors, since approval by a percentage of the shares present or outstanding is not required. Abstentions will have the same effect as a vote against Proposal No. 2, the ratification of the appointment of our independent registered public accounting firm, and Proposal No. 3, the proposal to approve an amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock.

Under the rules of the NYSE, if your broker holds your shares in its name (also known as street name), and does not receive voting instructions from you, the broker is permitted to vote your shares only on discretionary matters.

Proposal No. 2, ratification of the appointment of our independent registered public accounting firm, is the only discretionary matter that a broker is permitted to vote on at the Annual Meeting. Broker non-votes are generally not considered votes present in person or by proxy and entitled to vote at the Annual Meeting and therefore will have no direct impact on any other proposal. We urge you to give voting instructions to your broker on all voting items.

Q:

Is cumulative voting permitted for the election of directors?

A:

No. We do not allow you to cumulate your vote in the election of directors. For all matters proposed for shareholder action at the Annual Meeting, each share of common stock outstanding as of the close of business on the Record Date is entitled to one vote.

Q:

What happens if additional matters are presented at the Annual Meeting?

A:

Other than the three items of business described in this proxy statement, we are not aware of any other business to be acted upon at the Annual Meeting. If you grant a proxy, the persons named as proxy holders, Ralph M. Richart and Steve T. Laflin, will have the discretion to vote your shares on any additional matters properly presented for a vote at the meeting. If for any unforeseen reason any of our nominees is not available as a candidate for director, the persons named as proxy holders will vote your proxy for such other candidate or candidates as may be nominated by the Board, unless the Board chooses to reduce the number of directors serving on the Board.

Q:

Who will serve as inspector of elections?

A:

The inspector of elections will be a representative of International Isotopes Inc., and will be appointed at the Annual Meeting.

Q:

What should I do if I receive more than one set of voting materials?

A:

You may receive more than one set of voting materials, including multiple copies of this proxy statement and multiple proxy cards or voting instruction cards. For example, if you hold your shares in more than one brokerage account, you may receive a separate voting instruction card for each brokerage account in which you hold shares. If you are a shareholder of record and your shares are registered in more than one name, you will receive more than one proxy card. Please complete, sign, date and return, with respect to each proxy card and voting instruction card that you receive, or vote via telephone or Internet, as applicable.

Q:

How may I obtain a separate set of voting materials?

A:

If you share an address with another shareholder, you may receive only one set of proxy materials (including our annual report to shareholders and proxy statement) unless you have provided contrary instructions. If you wish to receive a separate set of proxy materials now or in the future, you may write or call us to request a separate copy of these materials from:

International Isotopes Inc.

Attn: Laurie McKenzie-Carter

4137 Commerce Circle

Idaho Falls, Idaho 83401

(208) 524-5300

Similarly, if you share an address with another shareholder and have received multiple copies of our proxy materials, you may write or call us at the above address and phone number to request delivery of a single copy of these materials.

Q:

Who will bear the cost of soliciting votes for the Annual Meeting?

A:

We are making this solicitation and will pay the entire cost of preparing, assembling, printing, mailing and distributing these proxy materials and soliciting votes. In addition to the mailing of these proxy materials, the solicitation of proxies or votes may be made in person, by telephone or by electronic communication by our directors, officers and employees, who will not receive any additional compensation for such solicitation activities. Upon request, we will reimburse brokerage houses and other custodians, nominees and fiduciaries for forwarding proxy and solicitation materials to shareholders. Your cooperation in promptly voting your shares and submitting your proxy by telephone, Internet or by completing and returning the enclosed proxy card will help to avoid additional expense.

Q:

Where can I find the voting results of the Annual Meeting?

A:

We intend to announce preliminary voting results at the Annual Meeting and publish final results in a Current Report on Form 8-K, which we expect to file with the Securities and Exchange Commission (SEC) within four business days

following the Annual Meeting.

Q:

What is the deadline to propose actions for consideration at next year's annual meeting of shareholders or to nominate individuals to serve as directors?

A:

You may submit proposals, including director nominations, for consideration at future shareholder meetings.

Shareholder Proposals: For a shareholder proposal to be considered for inclusion in our proxy statement for the 2013 Annual Meeting of Shareholders, the written proposal must be received by our Secretary at our principal executive offices no later than February 7, 2013. If the date of the 2013 Annual Meeting is moved more than 30 days before or after the anniversary date of this year's Annual Meeting, the deadline for inclusion of proposals in our proxy statement is instead a reasonable time before we begin to print and mail the proxy materials. Such proposals must also comply with SEC regulations regarding the inclusion of shareholder proposals in company-sponsored proxy materials. Proposals should be addressed to:

International Isotopes Inc.

Attn: Laurie McKenzie-Carter

4137 Commerce Circle

Idaho Falls, Idaho 83401

(208) 524-5300

For a shareholder proposal that is not intended to be included in our proxy statement as described above, the shareholder must deliver a proxy statement and form of proxy to holders of a sufficient number of shares of our common stock to approve that proposal and give notice to our Secretary no later than April 23, 2013.

Nomination of Director Candidates: You may propose director candidates for consideration by the Board. Any such recommendations should include the nominee's name and qualifications for Board membership and should be directed to our Secretary at the address of our principal executive offices set forth above.

Q:

How may I communicate with the Board or the non-management directors on the Board?

A:

You may submit any communication intended for our Board or the non-management directors by directing the communication by mail addressed to:

Ralph M. Richart, Chairman of the Board

P.O. Box 35

Oakdale, NY 11769

or

Christopher Grosso

480 Broadway, Suite 310

Saratoga Springs, NY 12866

CORPORATE GOVERNANCE PRINCIPLES AND BOARD MATTERS

We are committed to having sound corporate governance principles, which are essential to running our business efficiently and maintaining our integrity in the marketplace. Our Code of Ethics is available at www.internationalisotopes.com in the Investor Center section of our website.

Board Independence

The Board has determined that each of the current directors and nominees, other than Steve T. Laflin, our President and Chief Executive Officer, is independent under the NASDAQ listing rules. Furthermore, the Board has determined that none of the members of any of our standing committees, other than Mr. Richart, has a material relationship with us (either directly, through a family member or as a partner, executive officer or controlling shareholder of any organization that receives or makes payments from or to us) and each is "independent" within the meaning of NASDAQ's director independence standards under the NASDAQ Listing Rules. However, Mr. Richart does not meet the independence requirements for audit committee members set forth in NASDAQ Listing Rules because he is an "affiliated person" by virtue of his beneficial ownership of 17.99% of our common stock.

Board Structure and Committee Composition

Our Board has three directors and the following two committees: (1) Audit, and (2) Compensation. Mr. Richart serves as the Chairman of the Board and Mr. Laflin serves as our President, Chief Executive Officer and as a director. We believe that having a separate Chairman and Chief Executive Officer is appropriate given the current characteristics of our management. Mr. Richart, with his experience in the medical device and pharmaceutical industries and his prior service on public company board of directors and corporate medical advisory boards, is most capable of effectively identifying strategic priorities, leading Board discussions and defining our strategic objectives. Mr. Laflin, as the Chief Executive Officer, is the individual selected by the Board to manage our company on a day-to-day basis, and his direct involvement in our operations allows him to provide valuable insights with respect to strategic planning and the operational requirements to meet our short- and long-term objectives. Our independent directors bring experience, oversight and expertise from outside our company and the industry.

The membership and the function of each of the committees are described below. The Audit Committee operates under a written charter adopted by the Board, which is available on our website at www.internationalisotopes.com in the Investor Center section. The Compensation Committee does not have a written charter. During fiscal 2011, the Board held seven meetings. Each director attended at least 75% of all Board and applicable Committee meetings.

Directors are encouraged to attend our annual meetings of shareholders and all directors attended the 2011 annual meeting of shareholders.

Audit Committee

The Audit Committee was established in January 1997. The Audit Committee assists the Board in overseeing the integrity of our financial statements, our compliance with legal and regulatory requirements, our independent registered public accounting firm's qualifications and independence, and the performance of our internal audit function and independent registered public accounting firm. The Audit Committee is comprised of two members, Christopher Grosso and Ralph Richart, with Mr. Grosso serving as the chairman. Mr. Grosso is an "independent director" for audit committee service under NASDAQ Listing Rules. Mr. Richart is not an independent director for audit committee

service under NASDAQ Listing Rules because he is an "affiliated person" by virtue of his beneficial ownership of 17.99% of our common stock. The Audit Committee is directly responsible for the appointment, compensation, and oversight of our independent registered public accounting firm. The independent auditing firm reports directly to the Audit Committee. The responsibility of the Audit Committee includes resolving disagreements between our management and the independent registered public accounting firm related to financial reporting. The Audit Committee is also responsible for establishing procedures for receipt of complaints relating to accounting, internal control, and auditing and confidential, anonymous information submitted by employees relating to questionable accounting or auditing matters. The Audit Committee has the authority to employ independent counsel and other advisors in connection with its duties. The Board has determined that Mr. Richart and Mr. Grosso are "audit committee financial experts" based on their experience as disclosed in their respective biographies on page 9. The Audit Committee held one meeting in 2011.

The report of the Audit Committee is included on page 18 of this proxy statement.

Compensation Committee

The Compensation Committee was established in January 1997. The Compensation Committee reviews the compensation and benefits of all of our officers, makes recommendations to the Board and reviews general policy matters relating to compensation and benefits of our employees, including administration of our 2006 Equity Incentive Plan. The Audit Committee is comprised of two members, Christopher Grosso and Ralph Richart, with Mr. Richart serving as the chairman. The Compensation Committee held four meetings in 2011. We do not use any compensation consultants to determine, or recommend, any compensation for our officers or directors. Executive officers have no role in determining their own compensation. The independent directors approve the compensation of our Chief Executive Officer. The entire Board approves the compensation of our Chief Financial Officer. The practice of the Board has been to require unanimous approval to approve any action with respect to director compensation.

Nominating Committee

We do not have a standing nominating committee or committee performing similar functions or a nominating committee charter. The Board believes it is appropriate not to have such a committee because the entire Board including both of our independent Board members, Mr. Grosso and Mr. Richart, participate in the consideration of director nominees. Mr. Richart and Mr. Grosso are both "independent" under NASDAQ Listing Rules. The Board will continue to assess the necessity of a nominating committee and will establish one if necessary in the future. The entire Board considers any director nominees recommended by shareholders.

Consideration of Director Nominees

Shareholder Nominees. The Board does not have a formal policy regarding the consideration of director candidates nominated by shareholders because the Board is small and there is low turnover among its members. Shareholders may nominate director candidates in writing, including the nominee's name and qualifications for Board membership, directed to our Secretary at the address of its principal executive offices set forth above.

Director Qualifications. Board members should have high standards of professional and personal ethics, integrity and values. They should have relevant experience and ability with respect to making and overseeing policy in business, technology, government or education sectors. They should be committed to acting in our best interests and to objectively assessing Board, committee and management performance. They should have sufficient time to carry out their duties and should have the willingness and ability to serve multiple terms to develop a deeper understanding of our business affairs. Board members should be willing to avoid activities or interests that may create a conflict of interest with the director's responsibilities and duties to us.

Identifying and Evaluating Nominees for Directors. The Board uses a variety of methods for identifying and evaluating nominees for director. In the event of a vacancy on the Board, various potential candidates for director will be considered. Candidates may come to the Board's attention through current Board members, professional search firms, shareholders or other persons. These candidates will be evaluated at regular or special meetings of the Board, and may be considered at any point during the year. As noted above, properly submitted shareholder nominations for candidates to the Board will be considered. Following verification of the shareholder status of persons proposing candidates, recommendations will be aggregated and considered by the Board at a regularly scheduled meeting. If any materials are provided by a shareholder in connection with the nomination of a director candidate, such materials will be forwarded to the Board. In evaluating nominees, the Board will seek to achieve a balance of knowledge, experience and capability on the Board.

The Board's Role in Risk Oversight

The Board oversees our risk management activities. One of the Board's primary responsibilities under our corporate governance guidelines is reviewing our strategic plans and objectives, including our principal risk exposures. The Board addresses, at least annually, our principal current and future risk exposures. The Board receives regular reports from members of its committees, senior management and professional consultants on areas of material risk to our business, including operational, financial, legal and regulatory, and strategic and reputation risks. The Audit Committee oversees our procedures for the receipt, retention and treatment of complaints relating to accounting and auditing matters and oversees our management of legal and regulatory compliance systems. The Compensation Committee oversees risks relating to our compensation plans and programs. The Compensation Committee has reviewed and considered our compensation policies and programs in light of the Board's risk assessment and management responsibilities and will do so in the future on an annual basis. The Compensation Committee believes that we have no compensation policies and programs that give rise to risks reasonably likely to have a material adverse effect on us.

PROPOSAL NO. 1: ELECTION OF DIRECTORS

Our Board currently consists of three directors. At the Annual Meeting, each director will be elected to serve until the next annual meeting and until his or her successor is elected and qualified. Information regarding the business experience of each nominee to the Board is provided below. There are no family relationships among our executive officers and directors.

If you are a record holder and you sign your proxy card, but do not give instructions with respect to the voting of directors, your share will be voted "FOR" the three persons recommended by the Board. If you wish to give specific instructions with respect to the voting of directors, you may do so by indicating your instructions on your proxy card.

The Board expects that all of the nominees will be available to serve as directors. In the event that any nominee should become unavailable, however, the proxy holders, Steve T. Laflin and Ralph M. Richart, will vote for a nominee or nominees designated by the Board, unless the Board chooses to reduce the number of directors serving on the Board.

Our Board recommends a vote "FOR" the election to the Board of each of the following nominees:

Ralph M. Richart, age 78, was first elected to the Board in January 2002, and was elected by the Board to serve as Chairman in April 2002. Mr. Richart is professor emeritus in the Department of Pathology at Columbia University College of Physicians and Surgeons, where he was employed from 1963 to 2006. Mr. Richart has previously served on the board of directors of several public companies and corporate medical advisory boards. From 1972 to 2006, he served as Chief Executive Officer of several privately held companies in the fields of medicine and electronics. He has also consulted on clinical trials that resulted in FDA product approval, and he has served as an advisor to medical device and pharmaceutical companies as well as the Food and Drug Administration. His experience serving on a number of public company boards provides us with a unique perspective and insight into our operations, strategic goals, and challenges. In addition, Mr. Richart is our longest serving non-employee director and has extensive knowledge of our company and its operations.

Christopher Grosso, age 44, was first elected to the Board in April 2002. Mr. Grosso has been a principal of Kershner Grosso, Inc., a New York based money management and investment banking firm, since 1998. From 1989 to 1998, Mr. Grosso was a Senior Research Analyst and Portfolio Manager with Kershner Grosso. He currently leads the firm's investment banking and venture capital activities. Prior to joining Kershner Grosso, Mr. Grosso was with Howe and Rusling Investment Management and Chase Manhattan Bank. Mr. Grosso received a B.S. in Business Administration from Skidmore College. Mr. Grosso's significant financial expertise, including extensive experience with capital markets, investment banking and venture capital transactions, provides invaluable expertise to our Board in matters regarding our capital requirements and strategic direction.

Steve T. Laflin, age 55, was first elected to the Board in June 2001. Since August 2001, Mr. Laflin has served as our President and Chief Executive Officer. From 1996 to 2001, he served as President and General Manager of International Isotopes Idaho Inc., one of our subsidiaries. Mr. Laflin received a B.S. degree in Physics from Idaho State University and has been employed in various senior engineering and management positions in the nuclear industry since 1992. In addition to his institutional knowledge from his long tenure of service to us and his position as an executive officer, Mr. Laflin's significant engineering and management background in the nuclear industry is invaluable to the Board.

PROPOSAL NO. 2: RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board has appointed Hansen, Barnett & Maxwell, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2012. Hansen, Barnett & Maxwell, P.C. has served as our independent registered public accounting firm since 2001. Representatives of Hansen, Barnett & Maxwell, P.C. are expected to attend the Annual Meeting, where they will be available to respond to appropriate questions and, if they desire, to make a statement.

Our Board recommends a vote "FOR" the ratification of the appointment of Hansen, Barnett & Maxwell, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2012. If the appointment is not ratified, the Audit Committee will consider whether it should select other independent auditors.

INDEPENDENT PUBLIC ACCOUNTANT FEES

Fees billed by Hansen, Barnett & Maxwell, P.C. in fiscal years 2011 and 2010 were as follows:

| Services Rendered | FY2011 | FY2010 |
|---------------------------|------------------|------------------|
| Audit Fees ⁽¹⁾ | \$128,503 | \$114,586 |
| Audit-Related Fees | | |
| Tax Fees | | |
| All Other Fees | | |
| Total | \$128,503 | \$114,586 |

(1)

For professional services for auditing our annual financial statements and reviewing the financial statements included in our other periodic reports filed with the SEC.

The Audit Committee approved the engagement of the independent public accounting firm to provide audit services prior to the engagement and approved all of the fees of our independent registered public accounting firm for 2011.

PROPOSAL NO. 3: TO APPROVE AN AMENDMENT TO OUR RESTATED CERTIFICATE OF FORMATION TO EFFECT A REVERSE STOCK SPLIT OF OUR OUTSTANDING COMMON STOCK

The Board has adopted a resolution approving, and recommends to the shareholders for their approval, a proposed amendment to our Restated Certificate of Formation to authorize the Board to effect a reverse stock split with the primary intent to reduce the number of issued and outstanding shares of our common stock and to increase the per share trading value of our common stock, and for other purposes as described below in this proxy statement. Under this proposed amendment, a certain number of outstanding shares of our common stock, as determined by the applicable ratio, would be combined into one share of our common stock (the Reverse Stock Split).

If approved by the shareholders, the Board would have discretion to implement the Reverse Stock Split within a ratio range of 1-for-10 up to 1-for-100. The Board believes that shareholder approval of a range of ratios (as opposed to approval of a specified ratio) would provide the Board with maximum flexibility to achieve the purposes of the Reverse Stock Split and, therefore, is in the best interests of us and our shareholders. The actual timing for implementation of the Reverse Stock Split would be determined by the Board based upon its evaluation as to when such action would be most advantageous to us and our shareholders; *provided, however*, the Board does not intend to implement the Reverse Stock Split prior to our receipt of the license for our planned uranium processing facility from the Nuclear Regulatory Commission (NRC). Furthermore, notwithstanding shareholder approval, the Board also would have the discretion not to implement a Reverse Stock Split. If the Board were to elect to implement a Reverse Stock Split, the Board will set the exchange ratio within the range approved by the shareholders. The Board would base such a determination upon the then current trading price of our common stock, among other things. No further action on the part of the stockholders will be required to either implement or abandon the Reverse Stock Split.

The text of the form of amendment to our Restated Certificate of Formation that would be filed with the Secretary of State of the State of Texas to effect the Reverse Stock Split is set forth in Appendix A to this proxy statement; provided, however, that such text is subject to amendment to include such changes as may be required by the office of the Secretary of State of the State of Texas and as the Board deems necessary and advisable to effect the Reverse Stock Split. If the Reverse Stock Split is approved by the shareholders and following such approval the Board determines that a Reverse Stock Split is in the best interest of us and our shareholders, our Restated Certificate of Formation would be amended accordingly.

The Board recommends the Reverse Stock Split for the following reasons:

The Board believes that a reduction of the number of issued and outstanding shares of our common stock and a higher per share market price of our common stock could encourage investor interest in us and promote greater liquidity for our shareholders;

The Board believes that the Reverse Stock Split is the most effective means of increasing the per share market price of our common stock in order to facilitate our ability to meet the closing per share price criteria required to be listed on a major stock exchange; and

The Board believes that a reduction in the number of issued and outstanding shares of our common stock would be in our best interests as our capital structure would be more comparable to other publicly traded companies of similar size.

Reverse Stock Split

Our common stock is traded on the Over-the-Counter Bulletin Board (OTCBB) under the symbol INIS.OB The closing price of our common stock on the OTCBB on April 19, 2012 was \$0.22 and during the period April 19, 2011 through April 19, 2012 ranged from a low of \$0.055 to a high of \$0.32.

We may determine that it is in our shareholders best interests to list on a major stock exchange. Many major stock exchanges have listing criteria that require companies to satisfy minimum average closing prices over a threshold amount during a consecutive trading period in order to gain or maintain listing eligibility. NASDAQ, for example, currently requires that a company s common stock have a bid price that is greater than or equal to \$4.00 per share over a period of time. The Reverse Stock Split would give us additional flexibility and ability to reach these levels.

We also believe that an increase in the per share price of our common stock could encourage increased investor interest in our common stock and possibly promote greater liquidity for our shareholders. We believe that the current low per share price of our common stock has had a negative effect on the marketability of our common stock. We believe there are several reasons for this effect. First, many institutional investors view stocks trading at low prices as unduly speculative in nature and, as a result, avoid investing in such stocks. Second, because the brokers' commissions on lower-priced stocks generally represent a higher percentage of the stock price than commissions on higher priced stocks, the current per-share price of our common stock can result in individual shareholders paying transaction costs (commissions, markups or markdowns) that constitute a higher percentage of their total share value than would be the case if the share price of our common stock were substantially higher. This factor may also limit the willingness of institutional investors to purchase our common stock. Third, a variety of policies and practices of brokerage firms discourage individual brokers within those firms from dealing in low-priced stocks. These policies and practices pertain to the payment of brokers' commissions and to time-consuming procedures that make the handling of low-priced stocks unattractive to brokers from an economic standpoint. Fourth, many brokerage firms are reluctant to recommend low-priced stocks to their customers. Finally, the analysts at many brokerage firms do not monitor the trading activity or otherwise provide coverage of low-priced stocks.

Reducing the number of outstanding shares of our common stock through the Reverse Stock Split is intended, absent other factors, to simplify our capital structure and to increase the per share market price of our common stock. However, other factors, such as our financial results, market conditions and the market perception of our business may harm the market price of our common stock. As a result, there can be no assurance that the Reverse Stock Split, if completed, will result in the intended benefits described above, that the market price of our common stock will increase following the Reverse Stock Split, that the market price of our common stock will remain at such higher value for any significant length of time or that we will qualify for listing on a major stock exchange.

Board Discretion to Implement the Reverse Stock Split

If the Reverse Stock Split is approved by our shareholders at the Annual Meeting, the Reverse Stock Split will be effected, if at all, only upon a determination by the Board that the Reverse Stock Split at the applicable ratio (with such ratio determined by the Board as described above) is in the best interests of us and our shareholders. We believe the availability of a range of reverse stock split ratios will provide us with the flexibility to implement the Reverse Stock Split in a manner designed to maximize the anticipated benefits for us and our shareholders. In determining the reverse stock split ratio to implement, if any, following the receipt of stockholder approval, the Board may consider, among other factors:

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the historical trading price and trading volume of our common stock;

the then-prevailing trading price and trading volume of our common stock and the anticipated impact of the Reverse Stock Split on the trading market for our common stock;

our satisfaction of the requirements, and ability, to list on a major stock exchange; and

prevailing general market conditions.

Notwithstanding approval of the Reverse Stock Split by the shareholders, the Board may, in its sole discretion, abandon all of the proposed amendments and determine prior to the effectiveness of any filing with the Secretary of State of the State of Texas not to effect the Reverse Stock Split, as permitted under Section 21.052 of the Texas Business Organizations Code.

Impact of the Proposed Reverse Stock Split If Implemented

The Reverse Stock Split would affect all of our shareholders uniformly and would not affect any shareholder's percentage ownership interest or proportionate voting power, except to the extent that the Reverse Stock Split could result in any of our shareholders receiving cash in lieu of a fractional share. As described below, shareholders otherwise entitled to fractional shares as a result of the Reverse Stock Split will receive a cash payment in lieu of such fractional shares. These cash payments will reduce the number of post-reverse stock split shareholders to the extent there are presently shareholders who would otherwise receive less than one share of our common stock after the Reverse Stock Split. The other principal effects of the Reverse Stock Split will be that:

the number of issued and outstanding shares of our common stock will be reduced proportionately based on the final reverse stock split ratio as determined by the Board;

based on the final reverse stock split ratio, the per share exercise price of all outstanding option awards will be increased proportionately and the number of shares of our common stock issuable upon the exercise of all outstanding option awards will be reduced proportionately. These adjustments will result in approximately the same aggregate exercise price being required to be paid for all outstanding option awards upon exercise, although the aggregate

number of shares issuable upon the exercise of such option awards will be reduced proportionately following the Reverse Stock Split;

based on the final reverse stock split ratio, the per share exercise price of all outstanding warrants will be increased proportionately and the number of shares of our common stock issuable upon the exercise of all outstanding warrants will be reduced proportionately. These adjustments will result in approximately the same aggregate exercise price being required to be paid for all outstanding warrants upon exercise, although the aggregate number of shares issuable upon the exercise of such warrants will be reduced proportionately following the Reverse Stock Split;

the number of shares reserved for issuance and any maximum number of shares with respect to which equity awards may be granted to any participant under our equity compensation plans will be reduced proportionately based on the final reverse stock split ratio; and

the Reverse Stock Split will likely increase the number of shareholders who own odd lots (less than 100 shares). Shareholders who hold odd lots may experience an increase in the cost of selling their shares and may have greater difficulty in executing sales.

Effective Date

If the Reverse Stock Split is approved at the Annual Meeting and the Board elects to proceed with the Reserve Stock Split within the range of the approved ratios, the Reverse Stock Split would become effective when the filing of the certificate of amendment to our Restated Certificate of Formation is accepted and recorded by the office of the Secretary of State of the State of Texas (the Effective Date), although the exact timing of the filing will be determined by the Board based on its determination that such action will be in the best interests of us and our shareholders as discussed above. Except as explained below with respect to fractional shares, on the Effective Date, shares of our common stock issued and outstanding immediately prior thereto will be, automatically and without any action on the part of the shareholders, combined, converted and changed into new shares of common stock in accordance with the reverse stock split ratio determined by the Board within the range set forth in this proposal.

Fractional Shares

We do not intend to issue fractional post-reverse stock split shares in connection with the Reverse Stock Split. Shareholders who would otherwise hold fractional shares because the number of shares of common stock they hold before the Reverse Stock Split is not evenly divisible by the split ratio selected by the Board will receive cash (without interest) in lieu of such fractional shares in an amount equal to the product obtained by multiplying (a) the bid price per share of the common stock as reported on the OTCBB as of the Effective Date of the Reverse Stock Split, by

(b) the fraction of one share owned by the shareholder. The ownership of a fractional share interest will not give the holder any voting, dividend or other rights, except to receive the above-described cash payment. No transaction costs will be assessed on the sale. However, the proceeds will be subject to certain taxes as discussed below. In addition, shareholders will not be entitled to receive interest for the period of time between the Reverse Stock Split and the date shareholders receive payment for the cashed-out fractional shares.

If you believe that you may not hold sufficient shares of our common stock at the Effective Date to receive at least one share in the Reverse Stock Split and you want to continue to hold our common stock after the split, you may do so by either:

•
purchasing a sufficient number of shares of our common stock prior to the Effective Date; or

•
if you own shares of our common stock in more than one account, consolidating your accounts, so that in each case you hold a number of shares of our common stock in your account prior to Effective Date that would entitle you to receive at least one share of our common stock on a post-reverse stock split basis. Shares of common stock held in registered form (that is, stock held by you in your own name in our stock register records maintained by our transfer agent) and stock held in street name for the same investor will be considered held in separate accounts and will not be aggregated when effecting the Reverse Stock Split.

Exchange of Stock Certificates

Shareholders holding shares of our common stock in certificate form will be sent a transmittal letter by our transfer agent after the effectiveness of the Reverse Stock Split. The letter of transmittal will contain instructions on how a shareholder should surrender its, his or her certificate(s) representing shares of our common stock (Old Certificates) to the transfer agent in exchange for certificates representing the appropriate number of whole shares of post-reverse stock split common stock (New Certificates). No New Certificates will be issued to a shareholder until such shareholder has surrendered all Old Certificates, together with a properly completed and executed letter of transmittal, to the transfer agent. No shareholder will be required to pay a transfer or other fee to exchange his, her or its Old Certificates for New Certificates registered in the same name.

Upon surrendering all Old Certificates together with a properly completed and executed letter of transmittal, shareholders will receive a New Certificate(s) representing the number of whole shares of common stock to which they are entitled as a result of the Reverse Stock Split.

If an Old Certificate has a restrictive legend on the back of the Old Certificate, the New Certificate will be issued with the same restrictive legend that is on the back of the Old Certificate. Any shareholder whose Old Certificate has been lost, destroyed or stolen will be entitled to a New Certificate only after complying with the requirements that we and the transfer agent customarily apply in connection with lost, stolen or destroyed certificates.

Shareholders who hold uncertificated shares, either as direct or beneficial owners, will have their holdings electronically adjusted by the transfer agent (and, for beneficial owners, by their brokers or banks that hold in street name for their benefit, as the case may be) to give effect to the Reverse Stock Split.

Upon the Reverse Stock Split, we intend to treat shares of common stock held by shareholders in street name, that is, through a bank, broker or other nominee, in the same manner as shareholders whose shares of common stock are registered in their names. Banks, brokers or other nominees will be asked to effect the Reverse Stock Split for their beneficial holders. However, these banks, brokers or other nominees may have different procedures than registered shareholders for processing the Reverse Stock Split. If a shareholder holds shares of our common stock with a bank, broker or other nominee and has any questions in this regard, the shareholder is encouraged to contact the shareholder's bank, broker or other nominee.

SHAREHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATE(S) AND SHOULD NOT SUBMIT ANY STOCK CERTIFICATE(S) UNTIL REQUESTED TO DO SO.

Accounting Consequences of the Reverse Stock Split

The par value per share of our common stock will remain unchanged at \$0.01 per share after the Reverse Stock Split. As a result, on the Effective Date of the Reverse Stock Split, stated capital attributable to our common stock will be reduced and additional paid-in-capital will be increased by the amount by which stated capital is reduced. Per share net income or loss will be increased because there will be fewer shares of our common stock outstanding. We do not anticipate that any other accounting consequences, including changes to the amount of share-based compensation expense to be recognized in any period, will arise as a result of the Reverse Stock Split.

No Appraisal Rights

Under Texas law, our shareholders are not entitled to rights of dissent and appraisal with respect to the Reverse Stock Split.

Amendment to Restated Certificate of Formation

The form of the proposed amendment to our Restated Certificate of Formation to effect the Reverse Stock Split is attached to this proxy statement as Appendix A; provided, however, that such text is subject to amendment to include such changes as may be required by the office of the Secretary of State of the State of Texas and as the Board deems necessary and advisable to effect the Reverse Stock Split. If the Reverse Stock Split is completed, the amendment will effect a reverse stock split of our common stock at the ratio selected by the Board in its discretion and previously publicly announced by us.

Certain Federal Income Tax Consequences of the Reverse Stock Split

The following is a discussion of certain material U.S. federal income tax consequences of the Reverse Stock Split to us and to shareholders. This summary is based upon the provisions of the Internal Revenue Code, Treasury regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof, all of which are subject to change, possibly with retroactive effect. We have not sought a ruling from the Internal Revenue Service (or the *IRS*) with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with these statements and conclusions.

This summary does not address the tax considerations arising under the laws of any state, local or other jurisdiction and is limited to shareholders who will hold our common stock as a capital asset for tax purposes. This summary does not address all tax considerations that may be important to a particular shareholder in light of the shareholder's circumstances, or to certain categories of shareholders that may be subject to special rules, such as:

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banks, insurance companies or other financial institutions (except to the extent specifically set forth below);

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persons subject to the alternative minimum tax;

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tax-exempt organizations;

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controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax;

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dealers in securities or currencies and traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;

certain former citizens or long-term residents of the U.S.; or

persons who hold our common stock as a position in a hedging transaction, straddle, conversion transaction or other risk reduction transaction.

In addition, if a partnership (including any entity classified as a partnership for U.S. federal income tax purposes) holds our shares, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership. Accordingly, partnerships that hold our shares, and partners in such partnerships, should consult their tax advisors.

The following discussion of U.S. federal income tax consequences of the Reverse Stock Split is for general information only. You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the Reverse Stock Split arising under the U.S. federal estate or gift tax rules or under the laws of any state, local, non-U.S. or other taxing jurisdiction.

We believe that the Reverse Stock Split will constitute a reorganization under Section 368(a)(1)(E) of the Code. Accordingly, we should not recognize taxable income, gain or loss in connection with the Reverse Stock Split.

Except with respect to any cash received by a shareholder in lieu of fractional shares, discussed below, shareholders should not recognize any gain or loss for U.S. federal income tax purposes as a result of the Reverse Stock Split. Each shareholder's aggregate tax basis in the post-reverse stock split shares (including any fractional share not actually received) should equal the shareholder's aggregate tax basis in the pre-reverse stock split shares it surrenders therefor. In addition, each shareholder's holding period for the post-reverse stock split shares should include such shareholder's holding period for the pre-reverse stock split shares it surrenders therefor.

In general, the receipt of cash by a shareholder in lieu of a fractional share of the post-reverse stock split shares should be treated for U.S. federal income tax purposes as though such fractional share had been issued to the shareholder pursuant to the Reverse Stock Split and then redeemed by the Company, and such shareholder should recognize taxable gain or loss thereon based on the difference between the amount of cash received and such shareholder's basis in the fractional share. Such gain or loss will generally be capital gain or loss and will be long-term capital gain or loss if the shareholder's holding period in the fractional share is greater than one year as of the effective date of the Reverse Stock Split. Special rules may apply to cause all or a portion of the cash received in lieu of a fractional share to be treated as dividend income with respect to certain shareholders who own more than a minimal amount of shares, who exercise some control over the affairs of the Company, or whose relative ownership of the shares is not reduced as a result of the Reverse Stock Split (determined after applying certain ownership attribution rules that may treat the shares owned by certain family members and related entities of a shareholder as owned by such shareholder).

Shareholders should consult their own tax advisors regarding the tax effects to them of receiving cash in lieu of fractional shares based on their particular circumstances.

Information returns generally will be required to be filed with IRS with respect to the receipt of cash in lieu of a fractional share pursuant to the Reverse Stock Split in the case of certain shareholders. In addition, shareholders may be subject to backup withholding (at the current applicable rate of 28%) on the payment of such cash if they do not provide their taxpayer identification numbers in the manner required or otherwise fail to comply with applicable backup withholding rules. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be refunded or allowed as a credit against the shareholder's federal income tax liability, if any, provided the required information is timely furnished to the IRS

Our Board recommends a vote "FOR" the approval of the amendment to our Restated Certificate of Formation to effect the Reverse Stock Split.

MANAGEMENT

The following table sets forth certain information regarding our executive officers who are responsible for overseeing the management of our business and one key employee as of April 20, 2012:

| Names | Age | Principal Occupation | Positions with the Company |
|-----------------------------------|------------|---|---|
| <i>Executive Officers:</i> | | | |
| Steve T. Laflin | 55 | President and Chief Executive Officer, International Isotopes, Inc. | Director, President and Chief Executive Officer |
| Laurie A. McKenzie-Carter | 55 | Chief Financial Officer, International Isotopes, Inc. | Chief Financial Officer and Secretary |
| <i>Key Employee:</i> | | | |
| John Miller | 47 | Radiation Safety and Regulatory Manager, International Isotopes, Inc. | Radiation Safety and Regulatory Manager |

Please refer to the biographical information for Steve T. Laflin set forth on page 9 of this proxy statement.

Laurie A. McKenzie-Carter has served as our Chief Financial Officer since November 2007. Ms. McKenzie-Carter joined us in August 2007 as our Chief Accounting Officer. From 1998 to 2007, she served as Chief Accountant for the Idaho Falls Arts Council, Inc. while also performing accounting functions for Miles Willard Technologies LP.

Ms. McKenzie-Carter has practiced as a public accountant in Idaho for over 20 years, including experience in individual and corporate income tax preparation, and is a Certified Public Accountant licensed in the State of Idaho.

John Miller has served as our Radiation Safety and Regulatory Manager since 2001. In addition to overseeing our radiation and safety programs, Mr. Miller is the lead employee for regulatory issues and licensing. Considering the extensive requirements for regulatory compliance, licensing, and permits, Mr. Miller plays an especially important role for our business. Mr. Miller has over 25 years nuclear physics, safety, and licensing experience and has been instrumental in preparation and approval of our NRC license for operations in Idaho and more than 20 subsequent amendments to that license. Mr. Miller was also instrumental in the license application submitted to the NRC in December 2009 for our planned uranium processing facility. Mr. Miller has a BS in Physics, an MS in Environmental Engineering, and is a Certified Health Physicist.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our officers and directors and persons who own more than 10% of a registered class of our equity securities to file reports of ownership and changes in ownership with the SEC. To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations from certain of our officers and directors that no other reports were required, we believe that all required reports of our officers, directors and greater than ten percent stockholders under Section 16(a) were timely filed during the year ended December 31, 2011.

Code of Ethics

We have adopted a Code of Ethics for our principal executive officer, principal financial officer and principal accounting officer or controller. At the present time, Mr. Laflin serves as the Chief Executive Officer and Ms. McKenzie-Carter serves as the Chief Financial Officer. The Code of Ethics is available under the "Investor Center" tab of our website at www.internationalisotopes.com. If we waive, or implicitly waive, any material provision of the Code of Ethics, or substantively amend the Code of Ethics, we will disclose that fact on our website.

COMPENSATION OF DIRECTORS AND EXECUTIVE OFFICERS

2011 Summary Compensation Table

The following table provides information concerning the compensation of our named executive officers for the fiscal years ended December 31, 2011 and 2010.

| Name and Principal | | | Salary | Bonus | |
|-------------------------------|------|---------|--------|------------|--|
| Position | Year | (\$) | (\$) | Total (\$) | |
| Steve T. Laflin | 2011 | 185,000 | 10,000 | 195,000 | |
| President and CEO | 2010 | 185,000 | 37,500 | 222,500 | |
| Laurie McKenzie-Carter | 2011 | 96,000 | 5,000 | 101,000 | |
| CFO | 2010 | 91,800 | 7,500 | 99,300 | |

Employment Agreement. In February 2007, we entered into an Employment Agreement with Mr. Laflin to serve as our President and Chief Executive Officer at a base salary of \$160,000, subject to adjustment annually by the Board. Mr. Laflin is also entitled to an annual bonus at the end of each year, at the discretion of the Board. Under the agreement, if we were to be dissolved or sold, or were to become a private company whose shares are no longer traded on a public exchange, the Board would have the power to terminate Mr. Laflin's employment and Mr. Laflin would be entitled to receive salary and benefits under his employment agreement through the date of termination and for an additional 12 months thereafter. On June 23, 2010, we entered into a new Employment Agreement with Mr. Laflin, effective as of May 31, 2010, with terms substantially similar to the expired Employment Agreement, except that Mr. Laflin's annual base salary was changed \$185,000. The term of the new Employment Agreement was originally set to expire on October 31, 2010, but was extended to April 30, 2012, with a verbal commitment to extend the Employment Agreement in the future to 2017. Mr. Laflin is also subject to confidentiality, noncompete and nondisparagement provisions under the new Employment Agreement.

2011 Outstanding Equity Awards at Fiscal Year-End Table

The following table provides information regarding the number and estimated value of outstanding stock awards held by each of our named executive officers as of December 31, 2011.

| Name | Grant Date | Option Awards Number of Securities Underlying Unexercised Options (#) | | Option Exercise Price (\$) | Option Expiration Date |
|--------------------|---------------------------|---|---------------|----------------------------------|------------------------------|
| | | Exercisable | Unexercisable | | |
| Steve T. Laflin | 2/27/2002 ⁽¹⁾ | 8,500,000 | | \$0.02 | 2/27/2012 |
| | 5/4/2009 ⁽²⁾ | 1,500,000 | 1,500,000 | \$0.32 | 5/4/2019 |
| L. McKenzie-Carter | 10/31/2007 ⁽³⁾ | 1,000,000 | | \$0.70 | 10/31/2017 |
| | 5/4/2009 ⁽⁴⁾ | 250,000 | 250,000 | \$0.32 | 5/4/2019 |

(1)

Represents the unexercised portion of an option to purchase 10,000,000 shares of our common stock. The option vested and became exercisable in four equal annual installments beginning on February 27, 2002. Mr. Laflin exercised 1,500,000 options on August 8, 2007.

(2)

The option vests and becomes exercisable in four equal annual installments beginning on May 4, 2010, provided that Mr. Laflin remains employed with us as of each vesting date.

(3)

The option vested and became exercisable in five equal annual installments beginning on October 29, 2007.

(4)

The option vests and becomes exercisable in four equal annual installments beginning on May 4, 2010, provided that Ms. McKenzie-Carter remains employed with us as of each vesting date.

Change in Control Arrangements

Under our 2006 Equity Incentive Plan, to maintain all of the participants' rights in the event of (i) a merger or consolidation where we are not the surviving company; (ii) the dissolution of the Company, or (iii) a transfer of all or substantially all of our assets, any outstanding options will become fully exercisable and vested to the full extent of the original grant and the plan administrator can provide a cash-out for awards in connection with the transaction.

Additionally, under Mr. Laflin's employment agreement, if the we were to be dissolved or sold, or were to become a private company whose shares are no longer traded on a public exchange, the Board would have the power to terminate Mr. Laflin's employment and Mr. Laflin would be entitled to receive salary and benefits under the agreement through the date of termination and for an additional 12 months thereafter.

2011 Director Compensation

The following table sets forth information regarding compensation for each of our nonemployee directors for fiscal year 2011. We do not pay our nonemployee directors retainer fees or other fees for service related to the Board or its committees. We reimburse our nonemployee directors for their costs associated with attending Board and committee meetings. In 2011, those reimbursements were \$2,290 for Mr. Richart and \$2,730 for Mr. Grosso.

| Name | Fees Earned | | | Total |
|--------------------|-----------------|------------------------------|------------------------|-------|
| | or Paid in Cash | Option Awards ⁽¹⁾ | All Other Compensation | |
| Ralph M. Richart | | | | |
| Christopher Grosso | | | | |

⁽¹⁾ As of December 31, 2011 the aggregate number of shares underlying outstanding option awards for each nonemployee director was as follows: Mr. Richart 5,000,000 shares; and Mr. Grosso 5,000,000 shares.

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information known to us regarding the beneficial ownership of our common stock as of April 20, 2012 by:

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each person who beneficially owned more than 5% of our common stock on that date;

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each of our named executive officers and directors; and

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all of our executive officers and directors as a group.

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The number of shares beneficially owned by each entity or person is determined under the SEC rules, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the individual has the sole or shared voting power or investment power and also any shares that the individual has the right to acquire within 60 days of April 20, 2012 through the exercise of any stock option or other right. Except as otherwise indicated, each person named in the tables below has sole voting and investment power with respect to all shares of our common stock shown as beneficially owned by such person.

| Name and address of Beneficial Owner | Amount and Nature of Beneficial Ownership ⁽¹⁾ Percent of Class ⁽¹⁾ | |
|---|---|--------|
| Greater than 5% Shareholders: Kennerman Associates, Inc. ⁽²⁾ 480 Broadway, Suite 310 Saratoga Springs, New York 12866 | 104,506,113 | 28.59% |
| John M. McCormack ⁽³⁾ 1303 Campbell Road Houston, TX 77055 | 62,930,756 | 17.26% |
| Firebird Global Master Fund II, Ltd. ⁽⁴⁾ 152 West 57 th Street, 24 th Floor New York, New York 10019 | 36,319,632 | 9.96% |
| FG2 Advisors, LLC ⁽⁴⁾ 152 West 57 th Street, 24 th Floor New York, New York 10019 | 36,319,632 | 9.96% |
| James Passin ⁽⁴⁾ 152 West 57 th Street, 24 th Floor New York, New York 10019 | 36,319,632 | 9.96% |
| Harvey Sawikin ⁽⁴⁾ 152 West 57 th Street, 24 th Floor New York, New York 10019 | 36,319,632 | 9.96% |
| William Nicholson 121 Post Oak Lane, #2105 Houston, TX 77055 | 24,072,525 | 6.68% |
| James J. Keane ⁽⁵⁾ 26 Hillwood Avenue | 18,424,856 | 5.11% |

Edison, NJ 08820

Directors and Named Executive Officers:

| | | |
|---------------------------------|------------|--------|
| Ralph M. Richart ⁽⁶⁾ | 65,759,270 | 17.99% |
|---------------------------------|------------|--------|

P.O. Box 35

Oakdale, NY 11769

| | | |
|--------------------------------------|------------|-------|
| Christopher Grosso ⁽⁷⁾⁽⁹⁾ | 16,721,874 | 4.58% |
|--------------------------------------|------------|-------|

480 Broadway, Suite 310

Saratoga Springs, NY 12866

| | | |
|--------------------------------|-----------|-------|
| Steve T. Laflin ⁽⁸⁾ | 5,015,673 | 1.42% |
|--------------------------------|-----------|-------|

| | | |
|--|-----------|---|
| Laurie McKenzie-Carter ⁽¹⁰⁾ | 1,379,193 | * |
|--|-----------|---|

| | | |
|---|------------|--------|
| All Directors and Executive Officers as a Group (4 persons) | 88,876,010 | 24.34% |
|---|------------|--------|

* Less than 1%.

(1)

Unless otherwise indicated in these footnotes, to the knowledge of the Company, all shares are owned directly.

(2)

Represents shares reported on Schedule 13G/A dated April 3, 2012 for which Kennerman Associates, Inc. has shared dispositive power and includes shares of various investment advisory clients and shares held beneficially by Ralph M. Richart and Christopher Grosso, a principal of Kennerman Associates, Inc. Includes (i) 862,501 shares subject to warrants exercisable within 60 days of April 20, 2012 and (ii) 4,500,000 shares subject to vested stock options exercisable within 60 days of April 20, 2012.

(3)

Includes (i) 741,173 shares owned by Mr. McCormack's wife, (ii) 1,450,000 shares subject to warrants exercisable within 60 days of April 20, 2012, (iii) 20,197,046 shares beneficially owned by the John W. McCormack Trust, 965,278 of which are subject to warrants exercisable within 60 days of April 20, 2012, (iv) 20,197,302 shares beneficially owned by the Meagen McCormack Trust, 965,278 of which are subject to warrants exercisable within 60 days of April 20, 2012, and (v) 20,125,235 shares beneficially owned by the Daniel McCormack Trust, 965,278 of which are subject to warrants exercisable within 60 days of April 20, 2012. Daurice White, Mr. McCormack's assistant, is the trustee for each of the trusts for the benefit of Mr. McCormack's adult children. Mr. McCormack disclaims beneficial ownership of the shares beneficially owned by the trusts.

(4)

Represents shares reported on Schedule 13D/A dated August 26, 2011 and held by Firebird Global Master Fund II, Ltd., FG2 Advisors, LLC, James Passin and Harvey Sawikin. Excludes 883,334 shares of common stock subject to warrants which are immediately exercisable except to the extent that such conversion or exercise would result in beneficial ownership by the holder thereof of more than 9.9999% of the shares of common stock then issued and outstanding.

(5)

Includes 15,738,855 shares that are held by Mr. Keane and his wife beneficially and jointly, with right of survivorship. Mr. Keane's shares include 620,834 shares of common stock subject to warrants exercisable within 60 days of April 20, 2012 directly held by Mr. Keane.

(6)

Includes (i) 841,667 shares subject to warrants exercisable within 60 days of April 20, 2012, (ii) 4,500,000 shares subject to vested stock options exercisable within 60 days of April 20, 2012, and (iii) 1,374,866 shares held in a Richart family trust of which Mr. Richart is a co-trustee. This figure excludes 17,429,730 shares which are owned directly by Mr. Richart's adult children.

(7)

Includes (i) 541,667 shares subject to warrants exercisable within 60 days of April 20, 2012, (ii) 4,500,000 shares subject to vested stock options exercisable within 60 days of April 25, 2011, and (iii) 4,948,207 shares held by family members. Excludes 87,784,239 shares of common stock owned by various investment advisory clients of Kennerman Associates, Inc. d/b/a Kershner Grosso & Co.

(8)

Mr. Laflin's address is that of the Company. Includes 2,250,000 shares subject to stock options exercisable within 60 days of April 20, 2012.

(9)

Mr. Grosso and Mr. Richart are members of a group pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, as amended, because Mr. Grosso has investment power of the shares owned by Mr. Richart. The beneficial ownership number and percentage set forth in the table above for Mr. Grosso excludes 77,847,333 shares beneficially owned by Mr. Richart, his children or other family trusts. Mr. Grosso disclaims beneficial ownership of shares owned by Mr. Richart, his children or other family trusts.

(10)

Ms. McKenzie-Carter's address is that of the Company. Includes 1,375,000 shares subject to stock options exercisable within 60 days of April 20, 2012.

Related Person Transactions

We had no transactions with related persons during 2011 which are required to be disclosed by the rules of the SEC.

Policy on Transactions with Related Persons

The full Board reviews and approves any business transactions in which related persons may have an interest. In determining whether to approve or ratify any such transaction, the Board considers, in addition to other factors it deems appropriate, whether the transaction is on terms no less favorable to us than those involving unrelated parties.

Audit Committee Report

The Audit Committee has reviewed and discussed our audited financial statements for the fiscal year ended December 31, 2011 with our management and Hansen, Barnett & Maxwell, P.C., our independent registered public account firm. Management is responsible for the preparation, presentation and integrity of the financial statements, accounting and financial reporting principles and internal control over financial reporting. Hansen, Barnett & Maxwell, P.C. is responsible for performing an independent audit of the financial statements in accordance with generally accepted auditing standards and for expressing opinions on the conformity of the financial statements with accounting principles generally accepted in the United States.

The Audit Committee has discussed with Hansen, Barnett & Maxwell, P.C. the matters required to be discussed by Statement on Auditing Standards No. 61, *Communication with Audit Committees*, as may be modified or supplemented, and PCAOB AU Section 380, *Communications with Audit Committees*, and has received the written disclosures and the letter from Hansen, Barnett & Maxwell, P.C. regarding its independence as required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the Audit Committee concerning independence. The Audit Committee has discussed with Hansen, Barnett & Maxwell, P.C. their independence.

Based on the review and discussions referred to above, the Audit Committee recommended to the Board that the audited financial statements be included in our Annual Report on Form 10-K for the year ended December 31, 2011 for filing with the SEC.

Audit Committee Report Submitted by:

Christopher Grosso, Chairman
Ralph M. Richart

Householding

As permitted by the SEC's proxy statement rules, we will deliver only one Annual Report and Proxy Statement to multiple shareholders sharing the same address, unless we have received contrary instructions from one or more of the shareholders. We will, upon written or oral request, promptly deliver a separate copy of the Annual Report or Proxy Statement to a shareholder at a shared address to which a single copy of the Annual Report and Proxy Statement was delivered and will include instructions as to how the shareholder can notify us that the shareholder wishes to receive a separate copy of the Annual Report or Proxy Statement. Registered shareholders wishing to receive a separate annual report or proxy statement in the future or registered shareholders sharing an address wishing to receive a single copy of the annual report and proxy statement in the future may contact our transfer agent:

Computershare

250 Royall Street

Canton, MA 02021

Tele: 800.962.4284

BY ORDER OF THE BOARD OF DIRECTORS,

/s/ Steve Laflin

Steve T. Laflin

President and Chief Executive Officer

Idaho Falls, Idaho

June 7, 2012

Appendix A

**PROPOSED CERTIFICATE OF AMENDMENT
TO
RESTATED CERTIFICATE OF FORMATION
OF
INTERNATIONAL ISOTOPES INC.**

International Isotopes Inc. (the Corporation), a corporation organized and existing under and by virtue of the Texas Business Organizations Code, hereby certifies that:

1.

The name of the filing entity is International Isotopes Inc.

2.

The filing entity is a for-profit corporation.

3.

The Restated Certificate of Formation of the Corporation is hereby amended by adding the following paragraph to the end of Article IV:

Upon effectiveness of this Certificate of Amendment, a [__]-to-[__] reverse stock split of the Corporation's Common Stock shall become effective, pursuant to which every [__] ([__]) outstanding shares of Common Stock immediately prior to the effectiveness of this Certificate of Amendment shall be automatically reclassified and combined into one (1) share of Common Stock, par value \$0.01 per share, without any action by the holder thereof (the Reverse Stock Split). No fractional shares of Common Stock shall be issued as a result of the Reverse Stock Split and, in lieu thereof, any holder who would otherwise be entitled to a fractional share of Common Stock shall receive a cash payment equal to such fraction of a share of Common Stock multiplied by the fair value per share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Each certificate that immediately prior to the Reverse Stock Split represented shares of Common Stock (Old Certificates) shall thereafter represent that number of

shares of Common Stock into which the shares of Common Stock represented by the Old Certificate shall have been combined, subject to the elimination of fractional share interests as described above. The total number of shares of all classes of stock which the Corporation is authorized to issue shall not be affected by the Reverse Stock Split and shall remain as set forth in the first paragraph to this Article IV.

4.

The aforesaid amendment to the Corporation's Restated Certificate of Formation has been approved in the manner required by the Texas Business Organizations Code and by the governing documents of the Corporation.

IN WITNESS WHEREOF, International Isotopes Inc. has caused this Certificate of Amendment to be signed by its duly authorized officer, this ___ day of _____, 20__.

INTERNATIONAL ISOTOPES INC.

By:

Name:

Title:

Electronic Voting Instructions

You can vote by Internet or telephone!

Available 24 hours a day, 7 days a week!

Instead of mailing your proxy, you may choose one of the two voting methods outlined below to vote your proxy.

VALIDATION DETAILS ARE LOCATED BELOW IN THE TITLE BAR.

Proxies submitted by the Internet or telephone must be received by

12:00 a.m., Mountain Time, on July 17, 2012.

Vote by Internet

Log on to the Internet and go to

www.envisionreports.com/INIS

Follow the steps outlined on the secured website.

Vote by telephone

Call toll free 1-800-652-VOTE (8683) within the United States, Canada & Puerto Rico any time on a touch tone telephone. There is **NO CHARGE** to you for the call.

Follow the instructions provided by the recorded message.

Using a **black ink** pen, mark your votes with an X as shown in this example. Please do not write outside the designated areas. x

Annual Meeting Proxy Card

IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE.

INTERNATIONAL ISOTOPES INC.

1359 Commerce Way, Idaho Falls, ID 83401

Annual Meeting of Shareholders of International Isotopes Inc. to be held on July 17, 2012

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

A Proposals The Board of Directors recommends a vote **FOR** all the nominees listed and **FOR** Proposal 2 .

1. ELECTION OF DIRECTORS

| | | | | | |
|-------------|---------------------|----------------|---------------------|-------------|---------------------|
| | For Withhold | | For Withhold | | For Withhold |
| 01 STEVE T. | [] [] | 02 CHRISTOPHER | [] [] | 03 RALPH M. | [] [] |
| LAFLIN | | GROSSO | | RICHART | |

| | | | |
|--|------------|----------------|----------------|
| 2. RATIFICATION OF OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM | For | Against | Abstain |
| | [] | [] | [] |

The ratification of the appointment of Hansen, Barnett & Maxwell P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2012.

| | | | |
|------------------------------------|-----|-----|-----|
| 2. APPROVAL OF REVERSE STOCK SPLIT | [] | [] | [] |
|------------------------------------|-----|-----|-----|

The approval of an amendment to our Restated Certificate of Formation to effect a reverse stock split of our outstanding common stock.

B Non-Voting Items

Change of Address Please print your new address below.

C Authorized Signatures This section must be completed for your vote to be counted. Date and Sign Below

Please sign exactly as name(s) appears hereon. Joint owners should each sign. When signing as attorney, executor, administrator, corporate officer, trustee, guardian, or custodian, please give full title.

Date (mm/dd/yyyy) Please print
date below

Signature 1 Please keep
signature within the box.

Signature 2 Please keep
signature within the box.

IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE.

Proxy International Isotopes Inc.

THIS PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED HEREON BY THE UNDERSIGNED SHAREHOLDER(S). IF NO CHOICE IS SPECIFIED, THIS PROXY WILL BE VOTED FOR THE ELECTION OF EACH OF THE NOMINEES LISTED IN THE ACCOMPANYING PROXY STATEMENT; FOR THE RATIFICATION OF OUR INDEPENDENT

REGISTERED PUBLIC ACCOUNTING FIRM; AND FOR THE APPROVAL OF THE AMENDMENT OF OUR RESTATED CERTIFICATE OF FORMATION TO EFFECT A REVERSE STOCK SPLIT. IN THEIR DISCRETION, THE PROXIES ARE AUTHORIZED TO VOTE UPON SUCH OTHER MATTERS AS MAY PROPERLY COME BEFORE THE MEETING.

The undersigned shareholder(s) hereby appoint(s) Steve T. Laflin and Ralph M. Richart, and either of them, Proxies with full power of substitution in each and hereby authorize(s) them to represent and vote, as designated above, all the shares of Common Stock held of record by the undersigned on May 29, 2012, at the Annual Meeting of Shareholders of International Isotopes Inc., to be held at 2:00 p.m. Mountain time on July 17, 2012, at 1359 Commerce Way, Idaho Falls, Idaho 83401, or any adjournments or postponements thereof. The proxies are authorized to vote upon the proposals on the reverse side and, in their discretion, upon all other matters that may properly come before the Annual Meeting of Shareholders.

(Continued and to be signed on the reverse side.)