



International Isotopes Inc.
 "Making Clean Power Cleaner"

Depleted Uranium De-Conversion
 And
 Fluorine Extraction Project

March 2012



Forward-Looking Statements

Certain statements in this presentation are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Information contained in such forward-looking statements is based on current expectations and is subject to change. These statements involve a number of risks, uncertainties and other factors that could cause actual results, performance or achievements of International Isotopes, Inc. to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Those risks and uncertainties include, but are not limited to, changing market conditions, inability to raise financing, unanticipated costs and delays, time frames for licensing design and construction, feasibility of FEP on a large scale, expansion of the U.S. enrichment industry, opportunities with respect to fluoride products, and other risks detailed from time-to-time in the Company's ongoing filings and we encourage investors to review the risks presented in our filings with the SEC. Other factors, which could materially affect such forward-looking statements, can be found in International Isotopes Inc.'s filings with the Securities and Exchange Commission at www.sec.gov, including our annual report on Form 10-K for the year ending December 31, 2011. Investors, potential investors, and other readers are urged to consider these factors carefully in evaluating the forward-looking statements and are cautioned not to place undue reliance on such forward-looking statements. The forward-looking statements made herein are only made as of the date of this presentation and International Isotopes, Inc. undertakes no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

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Business History and Overview

- Started Commercial Operations in 1996
 – Publicly Traded "INIS"
- Started NRC Licensed Operations In Idaho 2001
 – 6 Business segments related to Nuclear Medicine products
- Acquired Fluorine Extraction Process Patents in 2004

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I³ Depleted Uranium and Fluorine Extraction Project

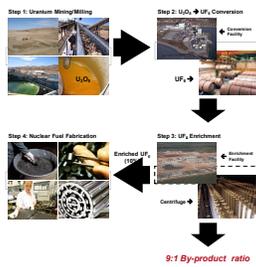
The Opportunity...

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I³ Nuclear Fuel Cycle

- Uranium goes through several steps in the process to create reactor-grade fuel
- Enrichment is one of the most important steps in the process
 - Increases the concentration of U-235 from ~0.7% to ~3.5%
 - Required to sustain nuclear fission chain reaction
- Enrichment generates the greatest volume of by-product from the nuclear fuel cycle
 - For every 1 unit of enriched UF₆ created, 9 units of "tails" are produced



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I³ Uranium Enrichment in the U.S.

- Expiration of the "Megatons to Megawatts" program 2013 - U.S. based enrichment capacity is growing
- Currently 4 enrichment facilities evaluating, planning, or building enrichment capacity in the U.S.

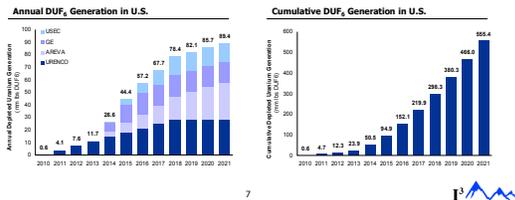


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DU Volume Predictions

Total new enrichment capacity expected in the U.S. of >15 million SWU per annum
Will generate over 80 million pounds of DUF₆ annually



Existing DUF₆ Stockpile



Historically – the DU "tails" issue has not been addressed

1.6 Billion pounds Currently stored by DOE.

Paducah: 39,000 Cylinders - 4 lines (~1,500 cylinders/yr) = 26 years of processing time

Portsmouth: 25,000 Cylinders – 3 Lines (~1,125 cylinders/yr) = 22.2 years of processing time



Depleted Uranium and Fluorine Extraction Project

Our Strategy...



I³ Our Strategy – Near Term Commercial Alternative

- Phase 1 – 11 million LBS DUF6 Capacity.

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    graph LR
      DUF6 -- De-convert --> DUF4
      subgraph Step1 [Step 1 - Proven process to chemically convert to DUF4]
        DUF6 --> DUF4
      end
      DUF4 -- FEP --> DUO2
      subgraph Step2 [Step 2: Can Produce a variety of fluoride gases]
        DUF4 --> DUO2
      end
      DUO2 --> Waste[Low-level waste]
  
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- Phase 2 - 24 million LBS DUF6 Capacity

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    graph LR
      DUF6 --> DUO2
      DUF6 --> HF[Anhydrous HF]
      DUO2 --> Waste[Low-level waste]
  
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I³ Depleted Uranium and Fluorine Extraction Project

Project Status...

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I³ Our Accomplishments

Acquisition of depleted uranium de-conversion equipment (UF6-UF4)	May 2008
Selection of Hobbs, New Mexico as location for de-conversion facility	March 2009
New Mexico Environment Department agreement completed	October 2009
Submission of NBC license application	December 2009
De-Conversion Services contract signed with URENCO (LES)	April 2010
Rocky Mountain Waste Compact Declaratory Order on DUF ₆	September 2010
DOE Loan Application submitted	December 2010
Design and Build contractor selected (Parsons)	July 2011
Land transfer completed	August 2011
New Mexico Air Permit application submitted	September 2011
Formal design work initiated	October 2011

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I³ DUF₆ to DUF₄ De-Conversion Plant Equipment

Acquired assets of the only complete de-conversion plant in the U.S. in 2008



- De-Construction completed December 2011
- Equipment relocation to New Mexico in 2012



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I³ DUF₆ to DUF₄ De-Conversion Plant Equipment



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I³ DUF₆ to DUF₄ De-Conversion Plant Equipment



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I³ Fluorine Extraction Process (FEP) Pilot Plant Operations

- Plant has successfully demonstrated production of several fluoride gases
- Granted an additional patent on the process technology (8th patent related to FEP)
- Large energy savings compared to conventional processes - (6 X Less Energy Per Pound)
- Additional scale-up work is underway



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I³ Licensing – Status (40 Year License)

Application	December 31, 2009	} Completed
Acceptance Review	February 24, 2010	
ACRS Subcommittee	June 4, 2010	
RAI Responses	May, 2011	
Draft EIS	January 2012	} Expected
Safety Evaluation Report	March 2012	
Final EIS	July 2012	
License	August 2012	

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I³ Licensing – Challenges

- SECY 07-0146
 - NRC to license large facilities with significant quantities of UF₆ source material under Part 40.
 - Impose Part 70 Subpart H, ISA requirements on these facilities
- October 2007 Commission approves SECY Recommendations
 - Staff to conduct a rulemaking to amend 10 CFR Part 40
 - Staff shall impose 10 CFR Part 70, Subpart H, ISA requirements as part of the licensing basis for the application review of new facilities in the interim.
- Pre-licensing meetings held with NRC in 2008 and 2009
- First Part 40 facility to be licensed in this manner

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I³ Licensing – Proposed Part 40

- Proposed Rule Published May 2011
- No surprises in the Proposed Rule, close resemblance to Part 70 Subpart H
- Public comments bring NRC sole jurisdiction into question
- Final comment resolution pending - Anticipate NRC regulation of source material
- ACRS Review
 - No objection to NRC staff issue SER as final
 - Staff's SER provides the basis for approving the license application

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I³ Depleted Uranium and Fluorine Extraction Project

Remaining Milestones...

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I³ Remaining Schedule and Milestones

Commence Construction (Non-Safety Structures and Site Prep.)	3rd Qtr. 2012
Expected Receipt of NRC License	~August 2012
Start Main Facility Construction	3rd Qtr. 2012
Begin Commercial Operations	4th Qtr. 2013

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I³

Summary and Conclusions

- Growth in U.S. uranium enrichment capacity is underway
- A viable long term treatment plan for large quantities of DU is essential in the U.S.
- INIS De-Conversion Project will provide:
 - A near term (<20 years) alternative for de-conversion of commercial DU
 - A new domestic source of certain important Fluoride products
- Few remaining milestones for the project

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