



3rd Federal Workshop on Isotope Supply and Demand
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Isotope Program Mission

The mission of the DOE Isotope Program is threefold:

- Produce and/or distribute radioactive and stable isotopes that are in short supply, associated byproducts, surplus materials and related isotope services.
- Maintain the infrastructure required to produce and supply isotope products and related services.
- Conduct R&D on new and improved isotope production and processing techniques which can make available new isotopes for research and applications.

Produce isotopes that are in short supply only – we do not compete with industry



*Isotope Production
Facility (LANL)*

**>225 customer orders in
FY2013**
>470 shipments in FY2013

FY 14 Enacted: \$19.4M
FY 15 Request: \$19.9M



*Brookhaven Linac
Isotope Producer*

DOE IP needs input from federal complex to make strategic plans

- What to produce for federal missions?
 - At university and laboratory facilities
 - At accelerators, reactors
 - What can we extract from legacy waste?
- What facility capabilities need to be developed?
 - Example: Enriched stable isotope production
- What merits R&D investment to develop new production capability?
 - Example: Alpha-emitters for medical applications
- Risks in supply chains that could create constrained supply
 - Political situations: Dependencies on Russian supply
 - Unforeseen spikes in federal demand



70 attendees

23 different federal institutions

Over 200 isotopes identified

- Armed Research Institute
- Defense Logistics Agency
- Defense Threat Reduction Agency
- Department of Agriculture
- DOE/National Isotope Development Center
- DOE/National Nuclear Security Administration
- DOE/New Brunswick Laboratory
- DOE/Office of Fossil Energy-Oil and Natural Gas
- DOE/Office of Intelligence
- DOE/Office of Nuclear Energy
- DOE/Office of Science
- Department of Homeland Security
- Department of State
- Department of Transportation
- Federal Bureau of Investigation
- Food and Drug Administration
- National Aeronautics and Space Administration
- National Institutes of Health
- National Institute of Standards and Technology
- National Science Foundation
- National Security Staff
- Office of Science & Technology Policy
- Office of the Director of National Intelligence



- Shortage of He-3 in 2008 caught federal complex by surprise
- Isotope Program moved to Office of Science in 2009
- We have been working to improve communication amongst federal agencies
 - To avoid shortages in isotopes that can impact federal missions
 - To increase availability of isotopes in short supply needed for federal missions
- Collected spreadsheets valuable input for developing strategies on isotope production, R&D investment, facility capability development
- Have followed through with each agency on their input
- Follow-ups for FY 2014 input this calendar year

- In addition, collect demand information for BLM on He-4



Created National Isotope Development Center

- The Department of Energy NIDC (includes the Isotope Business Office located at Oak Ridge National Laboratory) coordinates the distribution of all DOE isotope products and services available from DOE facilities.
- All contractual discussions with customers.
- Responsibilities in transportation, Q&A, public relations (website, newsletter, booth), cross-cutting technical topics, marketing strategy and assessments.
- Customers maintain technical discussions with sites.
- www.isotopes.gov

The screenshot shows the NIDC website homepage. At the top, the NIDC logo is displayed in large blue letters, followed by the text "NATIONAL ISOTOPE DEVELOPMENT CENTER". To the right of the logo is the tagline "the government source of isotopes for science, medicine, security, & applications" and the U.S. Department of Energy Office of Science logo. Below the header is a navigation bar with the following links: Product Catalog, Quick Links, Breaking News, Business Office, About NIDC, Gatherings, Outreach Education, Production Sites, Production Research, and Contact Us. Below the navigation bar are six image thumbnails: a glowing blue structure, a blue atom model, a heart with a ⁸²Sr isotope symbol, a colorful medical scan, a human spine with a red isotope spot, and a grid of blue isotope symbols. Below the thumbnails is a link that says "see Breaking News for details!". The main content area has a heading "Welcome to the NIDC !" followed by a paragraph: "The National Isotope Development Center (NIDC) interfaces with the User Community and manages the coordination of isotope production across the facilities and business operations involved in the production, sale, and distribution of isotopes. A virtual center, the NIDC is funded by the Isotope Development and Production for Research and Applications (IDPRA) subprogram of the Office of Nuclear Physics in the U.S. Department of Energy Office of Science." Below this is a paragraph: "Please visit the links in the navigational bar above to explore the content of the NIDC site, or click below to" followed by four links: "Join the NIDC Email List to get the latest Isotope news right in your inbox.", "Access the Product Catalog to get detailed specifications on all of our Isotope Products.", "Request a Quote for up to ten Isotope Products at once.", and "Search for Products in our Online Catalog of Isotope Products." Below these links is another link: "Access Newsletters & Notices to get the latest, and archived, news in the Isotopes world." At the bottom of the main content area, it says "You can contact the NIDC via email at isotopes@ornl.gov." and "Please read the Notice to Users of our site."



DOE

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Isotope Facilities
Marc Garland

Isotope Research
Dennis Phillips

Stable Isotopes and
Accountable Materials
Joel Grimm



- These meetings are venues to bring to your attention changes in isotope supply and demand that could be important to your agency mission
- As a representative of your agency, we rely on you to transmit any relevant information from this meeting back to your agency
- Thank you for your attendance!
- Thank you for the agency demand spreadsheet!
- We will be following up this calendar year to discuss your demand spreadsheet