



DEPARTMENTS

EDITORIAL

ANS Technical Journals	12
At the ANS Nuclear Cafe	13
Backscatter	76
Calendar	6
Late News	17
Nuclear Notes	4
People	73
Proceedings Available	12
Recently Published	12

ADVERTISING

Direct Answer	62
Index to Advertisers	61
Employment Ads Begin	75

Coming up . . .

July—Special Section on Operations
—Profile of incoming ANS
President John E. Kelly

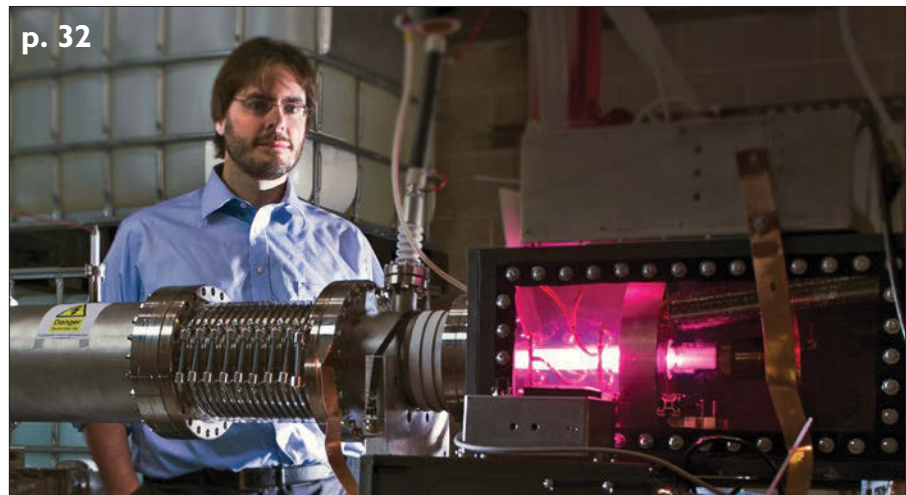
August—24th Annual Vendor/
Contractor Profile Issue

October—Outage Management/
Plant Maintenance Special Section

Members: View Nuclear News online!

At <www.ans.org>, click on Member Center at the upper right of your screen. Log in with your email address and password (if you haven't already, you can create a password at <account.ans.org>). Click on the heading for the current issue of *Nuclear News*.

On the cover: SHINE Medical Technologies' founder and chief executive officer, Greg Piefer—shown above with a prototype of the accelerator to be used, along with low-enriched uranium, to produce molybdenum-99—has set the second half of 2020 as the startup goal for the commercial production of Mo-99 at the company's new Janesville, Wis., facility. See the Special Section on Health Physics and Isotopes & Radiation, which starts on page 31, for more information on isotope production progress being made at SHINE and at other companies, as well as two additional articles on other HP- and I&R-related subjects. (Photo: SHINE)



Special Section: Health Physics and Isotopes & Radiation

Meeting the moly-99 challenge	32
Bridging the LNT and hormesis radiation protection models BY MEHDI SOHRABI	37
Lights in the desert: Anniversaries and celebrations BY WANDA MUNN AND ANNA MARKHAM	43

Power

14
Energy Secretary Perry ponders use of Cold War-era law to keep plants from closing. FirstEnergy Solutions disputes findings of PJM Interconnection's grid reliability study. Georgia Power announces more progress on Unit 3 at Vogtle plant site. NuScale Power's small modular reactor passes Phase 1 of the NRC's design certification review. NRC accepts Florida Power & Light Company's subsequent license renewal application for Turkey Point-3 and -4. South Carolina legislature wrangles over electricity rates and utility oversight related to the canceled Summer construction project. Focus on Finance. Political foes in Pennsylvania agree on need to keep Beaver Valley plant in operation. Report from The Brattle Group analyzes impacts of plant closures in Ohio, Pennsylvania. NRC seeks input on administrative rules review. U.S. Supreme Court rejects antinuclear group's appeal to prevent construction of Fermi-3.

Security

26
DOE proposes pit production as alternative use for unfinished MOX Fuel Fabrication Facility. NNSA marks a decade of collaboration with Romania.

Isotopes & Radiation

28
NASA and NNSA successfully demonstrate the Kilopower portable nuclear power reactor. NRC proposes fine for lost radioactive material at Idaho State University. Operating license issued for ANSTO's molybdenum-99 facility.

Policy & Legislation

48
U.S. House of Representatives passes bill to amend Nuclear Waste Policy Act with goal of jump-starting Yucca Mountain-related work.



International 50

Fuel loading begins at Sanmen-1 in China. China National Nuclear Corporation, Canadian Nuclear Laboratories sign clean-energy MOU. CNL takes next step toward development of small modular reactor project. First PWR simulation test of France's Cabri experimental reactor completed. United States, France sign nuclear R&D agreement. U.S. backs Westinghouse to finish six-unit AP1000 project in India. Construction under way on first VVER-TOI reactor at Kursk II site in Russia. Hunterston B1 restart delayed after inspection reveals cracks in graphite core. IAEA guidance document on estimating nuclear costs under way.

Waste Management 56

Quality assurance problems persist at Hanford's Waste Treatment and Immobilization Plant. Cesium removal system installed at Savannah River Site tank farm; other SRS news. Newport News Nuclear BWXT-Los Alamos takes over legacy waste cleanup contract at Los Alamos National Laboratory. IAEA assists in removal of disused radioactive sources from South America.

Fuel 65

Azarga Uranium and URZ Energy announce plans to merge; other business developments. NRC releases final environmental assessment for proposed Crow Butte expansion; other mining developments. NRC finds violation at Westinghouse's Columbia Fuel Fabrication Facility, nonconformance at Global Nuclear Fuel-Americas facility. Resource upgrade for Tiris uranium project in Mauritania announced; other resource news.

Research 68

DOE awards \$60 million in cost-shared R&D funding for advanced reactor research.

Industry 70

BWXT buys Nordion; Orano to supply Centrus. Bruce Power invests \$711 million in major components upgrade; other contracts.

Standards 72

Reaffirmed standard approved; other actions.

Editorial Staff

EDITOR & PUBLISHER

Betsy Tompkins

SENIOR EDITOR

Phyllis Ruzicka

ASSOCIATE EDITORS

Michael McQueen

Tim Gregoire

Susan Gallier

INTERNATIONAL EDITOR

Dick Kovan

PRODUCTION EDITOR

Patricia A. Matas

DESIGN/DESKTOP EDITOR

Chris Salvato

CONTRIBUTING COLUMNISTS

Linda C. Byus

E. Michael Blake

Advertising & Circulation Staff

SALES MANAGER

Jeff Mosses

ADVERTISING/PRODUCTION ASSISTANT MANAGER

Erica McGowan

ADVERTISING SALES ASSISTANT

Jessica Vazquez

Editorial Advisory Committee

Jess C. Gehin, John G. Gilligan, and Kevan D. Weaver

ANS Officers

PRESIDENT

Robert N. Coward

TREASURER

Darby S. Kimball

VICE PRESIDENT/ PRESIDENT-ELECT

John E. Kelly

CHAIRMAN, ANS PUBLICATIONS STEERING COMMITTEE

Donald G. Lorentz

Administrative

EXECUTIVE DIRECTOR

Robert C. Fine

ANS Headquarters

GENERAL NUMBER

708/352-6611

Fax 708/352-0499

www.ans.org

NUCLEAR NEWS EDITORIAL

708/579-8245

Fax 708/579-8204

nucnews@ans.org

NUCLEAR NEWS ADVERTISING

708/579-8226

800/NUC-NEWS

Fax 708/352-6464

www.ans.org/advertising

advertising@ans.org

INTERNATIONAL EDITOR (DICK KOVAN)

902/455-3575

dkovan@ans.org

Nuclear News (ISSN: 0029-5574), Volume 61, Number 7. Published monthly (except during the month of April when issued twice monthly) by the American Nuclear Society, Incorporated, with business, executive, and editorial offices at 555 N. Kensington Ave., La Grange Park, Illinois 60526; telephone 708/352-6611. Subscription rate for 2018 is \$610, which includes complimentary electronic access, 2008 to current issue; for subscriptions outside North America, add \$70 for shipping and handling. Alternatively, subscription rate is \$535 for Electronic Access Only, 2008 to current issue. Single copy price (regular monthly issues) is \$48; add \$12 for postage and handling if being shipped to address outside North America. Single copy price for annual mid-April Buyers Guide is \$115; add \$15 for postage and handling if being shipped to address outside North America. Individual ANS members receive *Nuclear News* as part of membership. Replacement copies may be obtained at the single copy price, as long as copies are available. Inquiries about the distribution and delivery of *Nuclear News* and requests for changes of address should be directed to the American Nuclear Society. Allow six weeks for a change to become effective. POSTMASTER: Send change of address orders to *Nuclear News*, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, Illinois 60526, or <nucnews@ans.org>.

Nuclear News is printed in New Richmond, Wis. 54017, by St. Croix Press, Inc. Nonprofit periodicals postage paid at La Grange, Illinois, and at additional mailing offices. Copyright © 2018 by the American Nuclear Society, Inc. Trademark registered in USA and Canada.

Opinions expressed in this publication by the authors are their own and do not necessarily reflect the opinions of the editors, the American Nuclear Society, or the organizations with which the authors are affiliated, nor should publication of author viewpoints or identification of materials or products be construed as endorsement by this publication or by the Society.

Texts of most *Nuclear News* articles are available on the LexisNexis database, from Mead Data Corporation.

