



DEPARTMENTS

EDITORIAL

ANS Technical Journals	14
At the ANS Nuclear Cafe	15
Backscatter	76
Calendar	6
Late News	17
Nuclear Notes	4
People	74
Proceedings Available	14
Publisher's Statement	68
Recently Published	13

ADVERTISING

Direct Answer	62
Index to Advertisers	61

Coming up . . .

January—Special Section on Education, Training & Workforce Development

February—Special Section on Instrumentation & Controls

March—21st Annual Reference Issue

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*.



Special Section: Fuel

43

TREAT: A look at its past, present, and future

BY HANK HOGAN

44

Industry-driven: A brief history of nuclear fuel innovation

BY DONNA RUFF

50

ATF: Accelerated innovation through collaboration

56

Feature Articles

A diamond in Dogpatch: The 75th anniversary of the Graphite Reactor—Part 2

BY SHERRELL R. GREENE

28

Mayo: *Introduction to Nuclear Concepts for Engineers*, 20 years on

INTERVIEW BY RICK MICHAL

32

Power

20

Hearing on rate relief for South Carolina Electric & Gas customers begins. Union of Concerned Scientists recognizes value of nuclear power. Advisory Committee on Reactor Safeguards comments on NRC's draft proposed rule for small modular reactors. Focus on Finance. PJM: There's "no imminent threat" to fuel security. Poll: More voters favor aid to nuclear than oppose it. NRC finds degraded performance at Grand Gulf.

Security

25

Federal appeals court upholds plutonium ruling regarding Savannah River Site. IAEA delegation visits Texas A&M University's Center for Nuclear Security Science and Policy Initiatives. Think tank recommends Savannah River Site as cybersecurity hub. DOE assesses emergency management program at Savannah River Site. DOE moves to protect critical electric infrastructure information.



International 34

Ontario Power Generation to support NuScale Power's SMR efforts in Canada. France's Flamanville-3 reactor pressure vessel authorized to operate. Uzbekistan launches first nuclear power plant project. I&C modernization at Finland's Loviisa plant completed. United Kingdom's Office for Nuclear Regulation announces new technical support policy. IAEA team conducts safety review of Argentina's Atucha-1. World Association of Nuclear Operators and World Nuclear Association launch new partnership. IAEA assesses emergency response capability of Belarusian nuclear power plant.

Fuel 39

DOE funds advanced fuel rod research led by GE team. DOE proposes fabricating fuel from high-assay low-enriched uranium. NRC issues draft environmental assessment and finding of no significant impact for proposed renewal of Metropolis Works' source materials license.

Waste Management 63

NRC updates public on spent fuel loading "near miss" at San Onofre nuclear power plant. NRC holds off on finding new Nevada site for Yucca Mountain hearings. SEFOR reactor core removed for disposal. Startup testing of cesium removal system at Savannah River Site completed. NRC approves Exelon's request for Oyster Creek license exemptions. Atomic Safety and Licensing Board to hear challenges to Holtec International's proposed consolidated interim storage facility.

Isotopes & Radiation 67

Bruce Power, Kinectrics to collaborate on isotope production.

Education, Training & Workforce 69

IAEA introduces training course on protecting nuclear facilities from cyberattacks. Students in the Philippines learn about nuclear science and technology.

Industry 71

Framatome opens Nuclear Parts Center in Lynchburg, Va.; other business developments. Wood wins engineering contract for Wylfa Newydd; other contracts. 10 CFR Part 21 reports filed with NRC.

Standards 73

Standards approved, comments requested.

Editorial Staff

EDITOR & PUBLISHER

Betsy Tompkins

SENIOR EDITOR

Phyllis Ruzicka

ASSOCIATE EDITORS

Michael McQueen

Tim Gregoire

Susan Gallier

Howard Ludwig

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

John E. Kelly

TREASURER

Darby S. Kimball

VICE PRESIDENT/ PRESIDENT-ELECT

Marilyn C. Kray

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

708/579-8244

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 13. 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 2019 is \$640, which includes complimentary electronic access, 2008 to current issue; for subscriptions outside North America, add \$70 for shipping and handling. Alternatively, subscription rate is \$560 for Electronic Access Only, 2008 to current issue. Single copy price (regular monthly issues) is \$50; add \$12 for postage and handling if being shipped to address outside North America. Single copy price for annual mid-April Buyers Guide is \$120; 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.

