Nuclear News



November 2016





DEPARTMENTS

EDITORIAL

| ANS Technical Journals Backscatter Calendar Late News Nuclear Notes People Publisher's Statement | 13 72 6 17 4 69 68 | | |
|--|--------------------------------------|----------------------|----|
| | | Recently Published | 12 |
| | | ADVERTISING | |
| | | Direct Answer | 58 |
| | | Index to Advertisers | 57 |
| | | Employment Ads Regin | 62 |

Coming up . . .

December—Special Section on Security

January—Special Section on Education,
Training, and Workforce Issues

March—19th 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 e-mail 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*.

Feature Article 34

Nuclear Power: How environmentalism lost its way by Paul Lorenzini

Volume 59, Number 12

Power 14

Watts Bar-2 nears start of commercial operation. Hurricane Matthew caused no damage to plants, but customers lost power. Challenges filed to PG&E's closure proposal for Diablo Canyon. New York agencies launch investigation into Indian Point oil spill. Report quantifies carbon-abatement value of nuclear. NRC grants request for Bell Bend license application withdrawal. Owners of Summer-2 and -3 ordered to increase construction milestone payments to Westinghouse. Maximizing the Assets: A status report on license renewal and power uprates. New designs for small modular reactors offer potential for standardization. Three unplanned shutdowns reported, orders issued.

Security 26

Russia suspends plutonium disposal agreement with United States. NRC cites MOX Services for violations at the Mixed Oxide Fuel Fabrication Facility. NNSA declares Poland, Indonesia HEU free; other NNSA news.

Policy & Legislation

30

Continuing resolution sustains federal government through December 9. Senate bill would boost whistleblower protections. DOE task force issues report on the future of nuclear power. Legislators weigh in on decommissioning rulemaking. New York State Public Service Commission answers critics of Clean Energy Standard.

International 4

Contracts signed for United Kingdom's Hinkley Point C new-build project. Canada and China sign agreement for Advanced Fuel CANDU Reactor joint venture. Inspections by Canadian Nuclear Safety Commission criticized by auditor. Paris Agreement enters into force on November 4. Japan establishes spent fuel reprocessing organization. South African energy minister delays release of RFPs for nuclear new-build program. Ukraine's Energoatom, Westinghouse agree to strengthen partnership.



Waste Management

46

10 CFR Part 61 final rule on low-level radioactive waste disposal released. Parts of WIPP repository to be closed due to rock falls. Legacy waste cleanup costs at Los Alamos National Laboratory could reach \$3.8 billion. New receipt tank at Savannah River Site begins receiving salt waste. Aiken, S.C., company seeks to license spent fuel facility. D&D of Soviet-era reactors could cost \$12.8 billion. Delay monitoring tank at Bradwell's ponds complex in the United Kingdom is dismantled.

Industry 51

Westinghouse acquires Nuclear Logistics Inc.; other business developments. Mid-America Conversion Services awarded contract to operate DUF₆ facilities; other contracts. Two Vogtle AP1000 reports submitted to NRC; other 10 CFR Part 21 updates.

Isotopes & Radiation

53

National Academies report warns of potential molybdenum-99 shortage. Michigan utility cited for radiation safety lapse.

Research 59

ITER, ANSTO forge agreement that allows Australia to contribute directly to the ITER project.

Education, Training & Workforce 60

Outside investigation looks into workplace issues at Columbia. Industry initiative addresses nuclear worker training. Interns at Princeton Plasma Physics Laboratory help get robotic arm functioning again.

Fuel 64

Public meeting follows inspection, corrective actions at Westinghouse's Columbia, S.C., fuel facility. Small steps advance mining projects around the world. Centrus signs enrichment contract with UT-Battelle to continue work on American Centrifuge technology. No Kazakh U production increase in current market; other business developments.

Standards & Documentation 67

One standard published, two approved; comments requested on one other. NRC issues revised regulatory issue summary on decommissioning timeliness; other NRC documents.

Editorial Staff

EDITOR & PUBLISHER
Betsy Tompkins

Phyllis Ruzicka

ASSOCIATE EDITORS

Michael McQueen

Kaitlin Schuler

Tim Gregoire

Susan Gallier

Susan Gallier
INTERNATIONAL EDITOR
Dick Kovan

PRODUCTION EDITOR
Patricia A. Matas

DESIGN/DESKTOP EDITOR
Chris Salvato

CONTRIBUTING COLUMNISTS
Linda C. Byus
Bill Minkler

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
Andrew C. Klein
VICE PRESIDENT/
PRESIDENT-ELECT
Robert N. Coward

TREASURER
Steven A. Arndt
CHAIRMAN, ANS PUBLICATIONS
STEERING COMMITTEE
Donald G. Lorentz

Administrative

Robert C. Fine

ANS Headquarters

GENERAL NUMBER
708/352-6611
Fax 708/352-0499
www.ans.org

NUCLEAR NEWS ADVERTISING
708/579-8226
800/NUC-NEWS
Fax 708/352-6464
www.ans.org/advertising
advertising@ans.org

NUCLEAR NEWS EDITORIAL
708/579-8245
Fax 708/579-8204
nucnews@ans.org
INTERNATIONAL EDITOR
(DICK KOVAN)
902/455-3575
dkovan@ans.org

Nuclear News (ISSN: 0029-5574), Volume 59, Number 12. 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 2016 is 5580, which includes complimentary electronic access, 2008 to current issue; for subscriptions outside North America, add \$70 for shipping and handling. Alternatively, subscription rate is \$510 for Electronic Access Only, 2008 to current issue. Single copy price (regular monthly issues) is \$45; add \$12 for postage and handling if being shipped to address outside North America. Single copy price for annual mid-April Buyers Guide is \$110; 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 <nucessessing and security of Nuclear News, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, Illinois 60526, or <nucessessing and security of Nuclear News, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, Illinois 60526, or <nucessessing and security of Nuclear News, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, Illinois 60526, or <nucessessing and security of Nuclear News, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, Illinois 60526, or <nucessessing and security of Nuclear News, American Nuclear Society, 555 N. Kensington Ave., La Grange Park, Illinois 60526, or <nucessessing and security of

 $Nuclear\ News$ 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 © 2016 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.

 $Texts of most {\it Nuclear News} \ articles \ are \ available \ on \ the \ LexisNexis \ database, from \ Mead \ Data \ Corporation.$



