Nuclear News Volume 61, Number 12



November 2018

DEPARTMENTS

EDITORIAL

ANS Technical Journals At the ANS Nuclear Cafe Backscatter Calendar Late News Nuclear Notes People Proceedings Available	12 13 72 6 17 4 69 12		
		Recently Published	12
		ADVERTISING	
		Direct Answer	58
		Index to Advertisers	57



Feature Article

A diamond in Dogpatch: The 75th anniversary of the Graphite Reactor—Part 1 BY SHERRELL R. GREENE

Quoting at Random

Ostendorff: Nuclear energy and national security

Power

Appeals court upholds New York's zero-emissions credit program. Judge sides with the Nuclear Energy Institute in dispute with NextEra Energy. Connecticut agencies find Millstone plant at risk of closure in 2023. Transatomic Power stops work on its molten salt reactor design, releases technology. First of four 375,000-pound reactor coolant pumps placed in Vogtle-3 containment vessel. Court approves settlement in FirstEnergy Solutions bankruptcy. NEI publishes road map for Defense Department micro-reactor pilot program. Maximizing the Assets: A status report on license renewal and power uprates. South Carolina Office of Regulatory Staff recommends that SCE&G not be allowed to recover Summer-2 and -3 construction costs incurred after March 2015. NRC issues final safety evaluation report and standard design approval for APR1400. Coowners of Vogtle plant suffer credit-rating downgrades. NRC's escalated enforcement actions in 2017 down from previous year. NRC issues revised Regulatory Guides on maintenance, other topics.

Security

32

38

14

22

Russian hackers targeted Westinghouse, indictment says. NRC Office of the Inspector General conducts audit of force-on-force inspections at fuel cycle facilities. Nuclear submarine USS Indiana is commissioned. Energy Secretary Rick Perry visits Sandia National Laboratories. Evans sworn in as head of DOE's new cybersecurity office. DOE awards \$28 million for cybersecurity projects. U.S. government imposes restrictions on nuclear trade with China. DOE moves to terminate construction of Mixed Oxide Fuel Fabrication Facility.

Coming up . . .

Employment Ads Begin

December—Special Section on Fuel

January—Special Section on Education, Training & Workforce Development

February—Special Section on Instrumentation & Controls

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.



International

Canadian Nuclear Laboratories hosts largest Small Modular Reactor Vendor Roundtable to date. Tool testing facility for CANDU projects opens in Ontario. IAEA's Integrated Regulatory Review Service completes 100th mission. Wolcott confirmed as U.S. ambassador to IAEA. Japan's Nuclear Regulation Authority says Tokai-2 complies with current regulatory standards. Action plan for construction of six Russian plants in India signed. U.K.'s Hinkley Point C project marks two years of progress. Stone named chair of U.K. Nuclear Industry Association.

Waste Management

DOE to clarify definition of high-level radioactive waste. DOE extends Hanford, Portsmouth contracts. DOE cleared to begin grouting of PUREX Tunnel 2 at Hanford Site. EPA finalizes cleanup decision for West Lake Landfill. Stop-work order lifted, cleanup of Shallow Land Disposal Area to proceed. Floating nuclear power plant Sturgis makes final journey before dismantlement.

Fuel

Wyoming to regulate uranium recovery as first "limited agreement" state. Commerce Department receives comments on investigation into uranium imports. NRC releases plan for licensing accident-tolerant fuel. License renewal proceeding for Westinghouse Columbia Fuel Fabrication Facility delayed for leak assessment.

Isotopes & Radiation

Canada's TRIUMF and Canadian Nuclear Laboratories to pursue production of actinium-225. Canada's Centre for Probe Development and Commercialization and McMaster reactor facility sign R&D agreement for medical radioisotope production. NRC issues confirmatory order, violation notices.

Research

Oak Ridge National Laboratory, U.K. National Nuclear Laboratory to cooperate on nuclear R&D. Idaho National Laboratory awards \$3.9 million for university-led projects.

Industry

⊗ANS

BWXT, Brotech open nuclear component manufacturing facility in Canada; other business developments. GE Power to supply turbines for Egypt's El Dabaa nuclear power plant; other contracts. 10 CFR Part 21 reports submitted to NRC.

Editorial Staff

FDITOR & PUBLISHER Betsy Tompkins

SENIOR EDITOR

Phyllis Ruzicka ASSOCIATE EDITORS Michael McQueen Tim Gregoire

Susan Gallier

Howard Ludwig

PRODUCTION EDITOR Patricia A. Matas **DESIGN/DESKTOP EDITOR**

INTERNATIONAL EDITOR

Dick Kovan

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 VICE PRESIDENT/ PRESIDENT-ELECT Marilyn C. Kray

TREASURER Darby S. Kimball

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 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 61, 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 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.



November 2018 • Nuclear News • 3

59

51

65

67