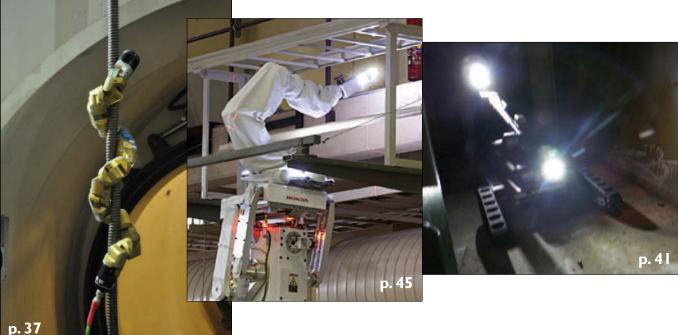
# Nuclear News

December 2013

Volume 56, Number 13





#### **DEPARTMENTS**

EDITORIAL	
Backscatter	72
Calendar	6
Calls for Papers	12
Late News	17
Nuclear Notes	4
People	70
Proceedings Available	14
Recently Published	14
ADVERTISING	
Direct Answer	58
Index to Advertisers	57
Employment Ads Begin	60
Coming up	
January—Report on the 2013 ANS Winter Meeting	
March—I6th 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 user name (member ID#) and password (last name, all lowercase, or your selected password). Click on the heading for the current issue of *Nuclear News*.

ROBOTICS & REMOTE SYSTEMS	SPECIAL SECTION:	
ROBOTICS & REMOTE STSTEMS	ROBOTICS & REMOTE SYSTEMS	33

Howie Choset: Snake robots INTERVIEW BY MICHAEL MCQUEEN	34
Robots: Helping in everyday operations, ready for emergencies BY KIM MONTI	38
Surveying places other robots cannot reach BY DICK KOVAN	44

# POWER 15

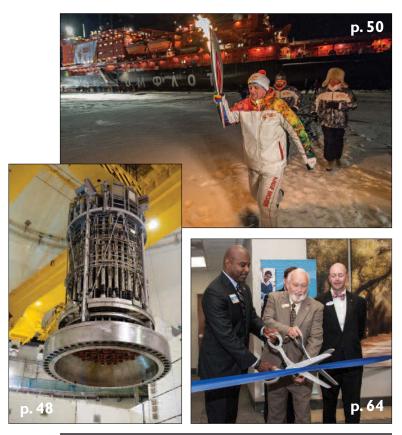
Climate scientists urge support for nuclear power. NRC allows heatup of Fort Calhoun reactor; restart decision still pending. NRC issues orders to former senior reactor operators, Exelon. Basemat concrete poured for Unit 3 at Summer site. More RAIs issued for ESBWR design certification. Watts Bar-2 still on pace for operation in late 2015. Renaissance Watch: An update on developments that may lead to new power reactors. NRC increases oversight of Pilgrim-1, Susquehanna-2. NRC denies petition in Limerick license renewal, revises schedules. Unplanned scrams at six reactors. NRC drops plans to change interlocutory appeals process.

# SECURITY 27

Bechtel-led team retains Y-12/Pantex contract. IAEA review finds U.S. nuclear security to be "robust." U.S.-Russian report addresses nuclear terrorism. NRC to amend special nuclear material regulations.

### INTERNATIONAL

Areva wins contract to complete Brazil's Angra-3. The Olkiluoto-3 reactor vessel head has been installed. South Korea awards \$10.6-million contract to Lloyd's Register. Agreement reached on Sinop new-build project in Turkey. Olympic torch reaches North Pole by nuclear-powered Russian icebreaker. Switzerland's Mühleberg nuclear plant to be closed in 2019. SCK-CEN, CERN team up to develop particle accelerators.



#### **WASTE MANAGEMENT**

DOE determines that suspect tanks at Hanford Site are not leaking. NRC extends comment period for proposed waste confidence rule. Savannah River Site employee recognized for innovative ideas. NRC finds licensee decommissioning funds to be sufficient. Court denies Nevada's appeal for a rehearing of Yucca Mountain case. Sludge removed from 11th single-shell tank at Hanford Site.

**FUEL** 

Black Range Minerals buys Shootaring Mill. Babcock & Wilcox, Lightbridge to develop pilot fuel fabrication facility. Parliament of Greenland votes to revoke ban on uranium mining.

## **INDUSTRY**

Organization established to promote nuclear industry in Virginia. AMEC acquires Automated Engineering Services; other business developments. SRNL's Energy Materials Research Laboratory officially opened on November 4. Areva awarded three contracts; other pacts.

#### RESEARCH 66

Key design changes proposed for ITER.

#### **ISOTOPES & RADIATION**

U.S. Army receives license to possess depleted uranium at Hawaiian sites. Oregon State University reactor could be supply source for Mo-99/Tc-99m.

#### **STANDARDS & DOCUMENTATION 68**

NRC issues six regulatory guides, proposes another.

#### **Editorial Staff**

**EDITOR & PUBLISHER Betsy Tompkins** 

INTERNATIONAL EDITOR

Dick Kovan

SENIOR EDITOR E. Michael Blake

SENIOR ASSOCIATE EDITOR Phyllis Ruzicka

ASSOCIATE EDITORS

Tim Gregoire Michael McQueen PRODUCTION EDITOR

Patricia A. Matas

DESKTOP EDITOR Chris Salvato

**EDITORIAL ASSISTANT** Susan Gallier

**CONTRIBUTING COLUMNISTS** Linda C. Byus Bill Minkler

#### Advertising & Circulation Staff

Jeff Mosses

ADVERTISING/PRODUCTION ASSISTANT MANAGER Erica McGowan

ADVERTISING DESIGNER/CIRCULATION SPECIALIST Lisa Dagley

#### **Editorial Advisory Committee**

Jess C. Gehin, John C. Gilligan, Roger W. Tilbrook, and Kevan D. Weaver

#### **ANS Officers**

PRESIDENT Donald R. Hoffman

VICE PRESIDENT/ PRESIDENT-ELECT Michaele C. Brady Raap

TREASURER Michael J. Lineberry

CHAIRMAN, ANS PUBLICATIONS STEERING COMMITTEE Martin L. Grossbeck

#### **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 56, Number 13. Published monthly (except during the month of April when issued twice monthly) by the American Nuclear Society, Incorporated, with business, executive, 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 is \$440 for 2013; overseas subscribers add \$70 per year for postage and handling, Additional fee for online access is \$110. Single copy price is \$42; \$12 additional for overseas postage and handling (except for the Buyers Guide issue, which is \$105; \$15 additional for overseas postage and handling). 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.orgs.

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 © 2013 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. not snould publication of author viewpoints of actinitization of inactinas of produces to constitute as an odorsement by this publication or by the Society.

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



