

Editorial Staff

EDITOR & PUBLISHER
Gregg M. Taylor

MANAGING EDITOR
Elizabeth S. Tompkins

INTERNATIONAL EDITOR
Dick Kovan

SENIOR ASSOCIATE EDITOR
Richard A. Michal

ASSOCIATE EDITOR
Patrick Sinco

PRODUCTION EDITOR
& ASSISTANT EDITOR
Deborah S. Nall

DESKTOP EDITOR
Chris Salvato

EDITORIAL ASSISTANT
Nancy Slove

CONTRIBUTING COLUMNIST
Bill Minkler

Advertising Staff

SALES MANAGER
Jeffery R. Mosses

ADVERTISING/PRODUCTION ASSISTANT
Patricia Fairchild

CIRCULATION ASSISTANT
Bess Weglarz

Editorial Advisory Committee

Ramon Ashley, Sam K. Bhattacharyya,
Annick Carnino, Doug Stickney,
Roger Tilbrook, and Paul Turinsky

ANS Headquarters

GENERAL NUMBER
708/352-6611
Facsimile 708/352-0499
Web site <www.ans.org>

NUCLEAR NEWS ADVERTISING
708/579-8226, 800/NUC-NEWS
Facsimile 708/352-6464
Web site <www.ans.org/advertising>
e-mail <advertising@ans.org>

NUCLEAR NEWS EDITORIAL
708/579-8245
Facsimile 708/352-6464
e-mail <nucnews@ans.org>

INTERNATIONAL EDITOR
(DICK KOVAN)
011-44-1737-842687
e-mail <dkovan@compuserve.com>

Nuclear News

November 2002

Volume 45, Number 12



SPECIAL SECTION: CP-1

33

| | | |
|--|--|----|
| The First Pile | BY CORBIN ALLARDICE AND EDWARD R. TRAPNELL | 34 |
| Weinberg: On the first controlled nuclear chain reaction | INTERVIEW BY RICK MICHAL | 40 |
| A historic date remembered | | 44 |
| A complex social phenomenon | BY MOHAMED ELBARADEI | 44 |
| Our improved quality of life | BY HAROLD RAY | 44 |
| First chain reaction, first nuclear plant | BY ANDREJ STRITAR | 44 |
| The foresight of Enrico Fermi | BY HAJIMU MAEDA | 45 |
| A new realm of science and technology | BY WILLIAM D. MAGWOOD IV | 46 |
| Accomplishments of the pioneers | BY RICHARD MESERVE | 46 |
| When the world quietly changed | BY HERMANN A. GRUNDER | 46 |
| Opening the way to nuclear power | BY EVGENY P. VELIKHOV | 47 |
| The road traveled, and looking forward | BY MICHAEL EVANS | 47 |
| A healthy reflection on the past | BY JERRY YELVERTON | 48 |
| Nuclear energy and sustainable development | BY LAURENT STRICKER | 48 |

FEATURE ARTICLES

| | | |
|----------------------------|----------------------------|----|
| James Acord: Atomic artist | INTERVIEW BY PATRICK SINCO | 50 |
|----------------------------|----------------------------|----|

POWER

20

Six Generation IV concepts identified for R&D. Plant siting: New program sets plant design parameters. Secretary Abraham stumps for national energy bill. Security experts assert plants safe from terror attacks. POGO report claims nuclear plants are vulnerable. Level 3 watch status advised for nuclear facilities. EPRI pushes back study's release date. Watts Bar-1 greenlighted for tritium production through license amendment. Missing computer icon leads to NRC violation at Calvert Cliffs. NRC issues confirmatory order finding employee discrimination within Exelon.

INTERNATIONAL

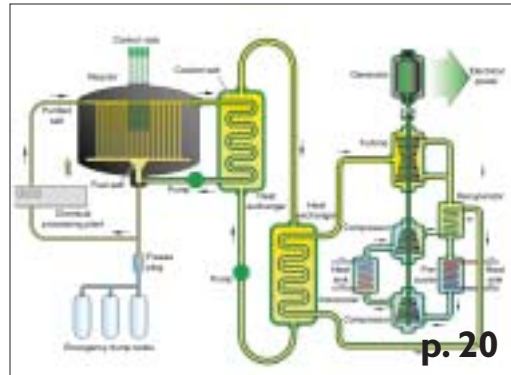
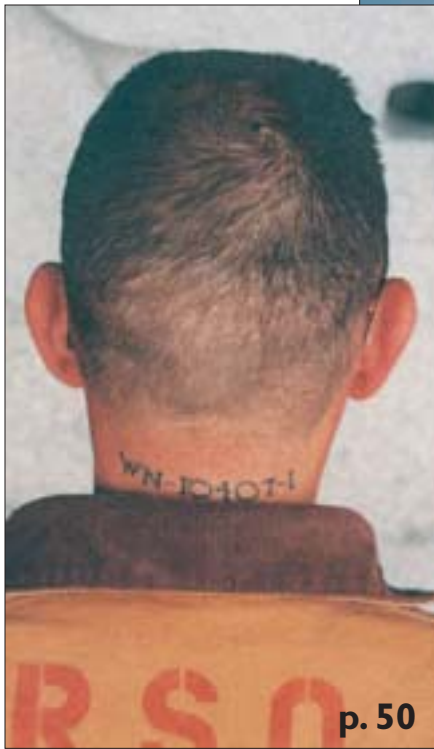
60

British Energy gets \$1 billion in government aid. MOX cargo arrives back in U.K. at Selafield. Switzerland's LLW/ILW repository project voted down. Personnel, business changes at Urenco. First Qinshan CANDU reactor, in China, achieves criticality. Bidding for fifth nuclear plant in Finland begins. World Nuclear Association annual meeting hears of new paths for nuclear.

MEETINGS

67

IAEA General Conference: Iraq situation placed squarely in the spotlight. IAEA Scientific Forum: Timely topics at the forefront.



ANS Officers

PRESIDENT
Harold Ray

VICE PRESIDENT/PRESIDENT-ELECT
Larry R. Foulke

TREASURER
Kyle Turner

CHAIRMAN, ANS PUBLICATIONS
STEERING COMMITTEE
Robert W. Hess

Administrative

EXECUTIVE DIRECTOR
Harry Bradley

Coming up ...

**December—Special Section
on Space Nuclear Power**

On the Cover

Workers assembling Chicago Pile-1, where the first controlled nuclear chain reaction occurred on December 2, 1942. See the special section in this issue with articles commemorating the 60th anniversary of that historic event. (Photo: Argonne National Laboratory)

INDUSTRY 76

MHIA becomes MHI hub in United States; other business developments. Eskom signs CAE for simulator; other contracts.

WASTE MANAGEMENT 77

Federal court agrees that Nuclear Waste Fund not a source for utility compensation. DOE awards contracts for SRS Salt Waste Processing Facility; other business developments. Rancho Seco: Fuel move from pool to dry storage facility completed.

RESEARCH 79

SRS begins study of hydrogen-based energy. UW-Madison fusion experiment receives \$2.7 million. FESAC forms panel to study fusion plant startup.

ISOTOPES & RADIATION 82

NRC reviews possible overexposures at job site. ORAU hired to estimate DOE worker dose rates.

SPACE APPLICATIONS 89

NASA awards contract for nuclear electric power technology development. DOE moves space radioisotope program to ANL-West.

FUEL 91

USEC-Tenex program hits conversion milestone. Gas enrichment deal reached by USEC and ORNL.

DEPARTMENTS

| | | | |
|----------------------------|-----|----|------------------------------|
| ANS Membership Application | 87 | 98 | Literature from Suppliers |
| Applications | 90 | 94 | People |
| Backscatter | 100 | 11 | Proceedings Available |
| Calendar | 6 | 9 | Recently Published |
| Employment | 99 | 12 | Retrospective |
| Equipment & Services | 95 | 4 | Setpoint |
| Index to Advertisers | 85 | 9 | Short Courses and Seminars |
| Late News in Brief | 17 | 9 | Software/Databases Available |
| Letters | 14 | 97 | |



Nuclear News (ISSN: 0029-5574), Volume 45, 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 is \$290 for 2002; overseas subscribers add \$51 per year for postage and handling. Single copy price is \$25; \$10 additional for overseas postage and handling (except for the Buyers Guide issue, which is \$91; \$10 additional for overseas postage and handling). Individual ANS members receive *NN* as part of membership (up to \$48 of dues allocated to *NN*). 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 © 2002 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 NEXIS data base, from Mead Data Corporation.