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### Coming up . . .

**March**—20th Annual Reference Issue

**May**—Special Section on Decommissioning

**On the cover:** University of Florida graduate student Riley Parrish works on a Rapid Turnaround Experiment funded by the Nuclear Science User Facilities (NSUF). The experiment, on the microstructural characterization of ~13 percent burnup mixed-oxide fuel, is being carried out using the focused ion beam at the Electron Microscopy Laboratory at Idaho National Laboratory's Materials and Fuels Complex. The Special Section on the Capabilities of the Nuclear Science User Facilities features a group of articles on various aspects of the NSUF and the facilities and instruments it offers for the irradiation testing of fuels and materials. The special section begins on page 35. (Photo: Chris Morgan, INL)

## Special Section: Capabilities of the Nuclear Science User Facilities

Nuclear Science User Facilities: Driving nuclear research BY RORY KENNEDY AND LAURA SCHEELE	35
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Synchrotron radiation, Illinois Tech, and the Nuclear Science User Facilities BY JEFF TERRY	59
UC Berkeley facility creates new research capabilities BY PETER HOSEMANN	62

## Power 12

SCANA, Dominion announce proposed merger; Santee Cooper chairman resigns. Renaissance Watch: An update on developments that may lead to new power reactors. California regulators approve PG&E's Diablo Canyon closure request. Focus on Finance. Major concrete placement completed for Vogtle-4.

## Security 22

FERC seeks to revise cyber incident reporting rules. NRC extends deadline for cyber security upgrades at Pilgrim, Oyster Creek. GAO report: Imported materials licenses not always verified by Customs and Border Protection. DOE issues final rule on grid security emergency orders.

## Policy & Legislation 25

FERC rejects grid resiliency proposal, starts new proceeding. EPA Administrator Scott Pruitt asks for public input on Clean Power Plan replacement rule. Senate bill seeks to revise nuclear production tax credit requirements. U.S District Court rules for South Carolina in dispute over plutonium removal.

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## International 28

White House shows strong support for U.S. nuclear industry during visit to Saudi Arabia. Kashiwazaki Kariwa-6 and -7 meet Japan's post-Fukushima standards. Areva completes sale of nuclear activities to EDF. South Korea's Hanaro research reactor restarts after extended outage. Geological exploration for United Kingdom's Bradwell B begins. Two U.K. government-backed projects aim to improve large nuclear component production.

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## Waste Management 67

Demolition of Hanford Site's Plutonium Finishing Plant placed on hold. Vermont Yankee nonradiological cleanup fund reaches \$31 million; NRC grants Entergy exemptions for use of decommissioning funds for Vermont Yankee spent fuel management. DOE issues environmental assessment on impact of accepting German spent fuel at Savannah River Site. Overseas Private Investment Corporation provides \$250-million loan for construction of spent fuel facility in Ukraine.

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## Fuel 71

NRC prepares to regulate accident-tolerant fuel. National Nuclear Security Administration submits preliminary report on uranium-molybdenum research reactor fuel to NRC. Draft environmental assessment for Crow Butte expansion released; other mining developments.

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## Isotopes & Radiation 74

NRC proposes five-figure fine for improper packaging of radiological materials for shipping; other enforcement news.

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## Research 81

General Fusion's full-size plasma injector begins operations. DOE issues funding opportunity announcement for new energy R&D projects.

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## Education, Training & Workforce 83

Massachusetts Institute of Technology restores subcritical graphite pile. United Arab Emirates engineers complete Emirates Nuclear Energy Corporation's fuel design program. Idaho-based team receives nuclear research grant.

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## Industry 85

Toronto, Ontario-based Brookfield Business Partners to buy Westinghouse. GSE Systems closes U.K. engineering offices; other business developments. Steam Generator Replacement Team signs on to replace Bruce steam generators; other contracts. Thermostatic valve defect prevented proper function; other 10 CFR Part 21 reports.

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## Standards & Documentation 88

Three standards approved; other actions. NRC draft regulatory guide, NUREG issued for comment.

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