

## Nuclear Reactors

### *Power Reactors*

- Completed more than 1,300 licensing actions and other licensing tasks, including license renewal applications and actions that support the safe transition of operating plants to decommissioning
- Confirmed implementation of safety enhancement Orders in response to the March 2011 accident at the Fukushima Dai-ichi plant in Japan related to the mitigating strategies, spent fuel pool instrumentation, and severe-accident-capable hardened containment vent orders; completed post-Fukushima flood and seismic hazard reevaluation activities for over three-quarters of reactor sites; completed all post-Fukushima activities for approximately one-half of reactor sites
- Issued a final rule for mitigating severe events at U.S. nuclear reactors based on lessons learned from the Fukushima accident
- Issued renewed operating licenses for River Bend Unit 1, Waterford Unit 3, and Seabrook Unit 1 on December 20 and 27, 2018, and March 12, 2019, respectively, to authorize operation for an additional 20 years beyond the original license expiration dates. These issuances bring the total number of renewals to 94 reactor units. The NRC is currently reviewing three subsequent license renewal applications for Turkey Point Units 3 and 4, Peach Bottom Units 2 and 3, and Surry Units 1 and 2, which would extend their operating licenses from 60 to 80 years
- Continued oversight of construction for two new reactors at Vogtle
- Completed all required inspection and assessment activities of the Reactor Oversight Process, including initiating four inspections in response to safety-significant events
- Participated in Eagle Horizon 2018 and 2019, national-level exercises that tested the NRC's ability to relocate senior managers during a Continuity of Operations event
- Continued to conduct force-on-force security inspections at U.S. nuclear power plants, testing licensees' abilities to protect against the design-basis threat
- Completed the first series of full-implementation cybersecurity inspections
- Published extensive research results on a variety of topics related to operating facility safety, severe accident analysis, improved methods for risk assessment, reliability of examination methods for primary system boundary components, seismic analysis guidelines, and fire phenomena for electrical faults
- Strengthened nuclear safety cooperation through more than 100 active international agreements, including partnerships under the recently created Radiation Protection Analysis Program

### *Nonpower Reactors*

- Issued a license amendment to Purdue University authorizing a complete replacement of the analog instrumentation and control systems with an all-digital system and reactor console, a first-of-its-kind for a research reactor
- Prepared the regulatory framework and infrastructure for licensing and oversight of construction and operation of medical radioisotope production facilities

## Materials and Waste

- Completed approximately 1,600 radioactive materials licensing actions
- Completed the review of the Agreement State application for Wyoming, which became an Agreement State on September 30, 2018
- Finalized a memorandum of understanding with the U.S. Food and Drug Administration to share information on new medical technologies, leverage expertise, and explore the possibility of streamlining the respective processes to reduce duplication of effort while still fulfilling the respective missions of each agency
- Evaluated the training and experience requirements for physicians who use certain byproduct material to treat patients, to determine whether to tailor training and experience requirements for different categories of radiopharmaceuticals
- Transmitted the 2018 Radiation Source Protection and Security Task Force Report to the President and Congress, which concluded that there are no significant gaps in the area of radioactive source protection and security that are not already being addressed through continued attention by the appropriate Task Force agencies

- Completed nine Integrated Materials Performance Evaluation Program reviews of Agreement States
- Terminated the license for the research reactor for the State University of New York at Buffalo and released the site for unrestricted use
- Terminated the license for the Westinghouse Electric-Hematite site in Festus, MO, and released the site for unrestricted use
- Issued NRC Information Notice 2018-06, "Determination of Management Measures for Process Isolation Controls Designated as Items Relied on for Safety and Implementation of Adequate Quality Assurance Measures for Plant Features and Procedures," dated April 10, 2018
- Submitted to the International Atomic Energy Agency (IAEA) the inventory reporting information for NRC licensees in Puerto Rico with source or special nuclear material, completing the initial obligations for the U.S. Government under the U.S.-IAEA Caribbean Territories Safeguards Agreement
- Terminated the special nuclear material license for the AREVA Nuclear Materials, LLC, Eagle Rock Enrichment Facility (Idaho Falls, ID) in August 2018, which was licensed but never constructed
- Issued a special nuclear material license for Johns Hopkins University Applied Physics Laboratory (Laurel, MD) in February 2019
- Terminated the construction authorization (CAMOX-001) for the Mixed Oxide Fuel Fabrication Facility (Aiken, SC) in February 2019

### Agencywide

- Continued to oversee the safe and secure operation of nuclear power plants and fuel cycle facilities, as well as the possession and use of radioactive materials
- Pursued substantial rulemaking activities on topics including American Society of Mechanical Engineers codes and code cases; reactor vessel material surveillance; enhanced weapons, firearms background checks, and security event notifications; enhanced security for special nuclear material; industrial radiography; low-level radioactive waste disposal; and petitions for rulemaking submitted by members of the public
- Issued fiscal year (FY) 2019 final fee rule after increasing transparency and openness through a public meeting and other stakeholder outreach
- Implemented and piloted an e-Concurrence system within the Office of the Chief Information Officer and Office of Nuclear Regulatory Research. The system was developed in adherence to Management Directive 3.57, "Correspondence Management," dated December 2, 2016, and aligns with the November 28, 2011, White House directive that requires Federal Government agencies to transition from paper-based records management to electronic records management
- Issued 45 escalated enforcement actions under traditional enforcement (the Reactor Oversight Process and the Construction Reactor Oversight Process), of which 12 involved civil penalties totaling \$489,500, two were enforcement orders without an imposed civil penalty, and 31 were escalated notices of violation without a proposed civil penalty

### International Activities

- Represented the NRC as part of U.S. delegations, negotiating agreements for civil nuclear cooperation (Section 123 Agreements)
- Participated in various U.S. Government nuclear safety and security initiatives in collaboration with U.S. executive branch agencies through activities such as meetings of the Nuclear Suppliers Group, IAEA Board of Governors, Group of Seven (G7) Nuclear Safety and Security Group, and Joint Standing Committees on Nuclear Energy Cooperation
- Participated as part of U.S. Government delegations to international meetings addressing the implementation of treaties and conventions, including the Sixth Review Meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the Technical Meeting of Representatives to the Convention on the Physical Protection of Nuclear Materials and its Amendment, and the Treaty on the Non-Proliferation of Nuclear Weapons Preparatory Committee meeting

## ACCOMPLISHMENTS AND HIGHLIGHTS FOR 2018–2019

- Supported numerous IAEA regulatory peer review missions, including the Integrated Regulatory Review Service and the International Physical Protection Advisory Service
- Assisted several countries in finalizing national registries of radioactive sources and provided ongoing support to countries that developed registries through the NRC's Radiation Sources Regulatory Partnership
- Continued regulatory program development assistance, through the NRC's International Regulatory Development Partnership, for countries considering or operating civilian nuclear power or research reactor programs

### Administration

- Processed 496 Freedom of Information Act (FOIA) requests and 120 appeals in FY 2018, with 122 FOIA requests and three FOIA appeals in the backlog by the end of FY 2018
- Closed 95 investigations in FY 2018; in 95 percent (90 investigations), developed sufficient information to reach a conclusion about substantiated or unsubstantiated allegations of willful wrongdoing
- Closed the case of two former Tetra Tech EC, Inc., employees charged in U.S. District Court, Northern District of California, with one count of destruction, alteration, or falsification of records in Federal investigations and bankruptcy, in violation of 18 U.S.C. § 1519, where they pleaded guilty in 2017 to the falsification of records regarding radiological remediation at the Hunter's Point Naval Shipyard, San Francisco, CA; both were sentenced 8 months in prison and ordered to pay fines (\$10,000 and \$2,000, respectively), and both were placed on 3 years of supervised release following their prison sentences
- Conducted agency outreach to audiences interested in NRC activities, including through the use of social media
- Awarded and maintained a portfolio of more than 800 contracts, blanket purchase agreements, purchase orders, interagency agreements, and grants, with obligations in excess of \$300 million in FY 2018
- Received 125 proposals for the Integrated University Program and awarded 51 grants in FY 2018: 11 faculty development, 18 scholarship, 16 fellowship, and six trade school/community college scholarships; awarded \$15 million in grants to 34 academic institutions
- Awarded \$5.5 million in grants to eight Minority Serving Institutions in FY 2018

### Public Meetings and Involvement

- Hosted the annual Regulatory Information Conference, where thousands of participants from around the world discussed the latest technical issues
- Conducted approximately 1,000 public meetings in the Washington, DC, area and around the country addressing a full range of NRC issues to support transparency with agency stakeholders
- Conducted 10 full committee meetings of the Advisory Committee on Reactor Safeguards and approximately 40 subcommittee meetings in calendar year 2018
- Held five public meetings of the Advisory Committee on the Medical Uses of Isotopes in calendar year 2018

### News and Information

- Maintained the NRC Web site and free listserv subscription services at <https://www.nrc.gov/public-involve/listserve.html> to post and distribute NRC news releases
- Shared information with the public using social media through platforms that address the major categories of social communication, with a focus on social networking and microblogging (Facebook and Twitter, respectively)
- Gained nearly 1,100 followers on Twitter and sent approximately 430 tweets; gained more than 1,200 page likes and published approximately 225 posts on Facebook
- Issued 173 news releases in FY 2018

For more information on the agency's accomplishments, go to <https://www.nrc.gov/reading-rm/doc-collections/congress-docs/>.