



# RIC 2013

# FACTOID SLIDESHOW



**NRC's first Chairman, Bill Anders,  
was an astronaut on Apollo 8's  
mission to the moon.**



**Dresden Unit 1, the first commercial nuclear plant in the United States, was licensed in 1959 by the Atomic Energy Commission. It was decommissioned in 1978.**



**Region I licenses and inspects over 950 materials licensees in the non-Agreement States in Regions I & II and is responsible for licensees in Puerto Rico and the Virgin Islands.**



**NRC's Headquarters Operations Center is open and staffed 24 hours a day, 7 days a week and remains open for holidays, inclement weather, or other instances when the Federal Government is closed.**



**Staff in Region IV oversees the use of radioactive materials in the Pacific Territories and 22 western States.**



**Eight nuclear units are located within 90 miles of NRC's Region III office – Braidwood, Byron, Dresden, and LaSalle. Each plant has two units.**



**The Office of New Reactors was established in 2006.**



**The Computer Security Office ensures that agency programs comply with the Federal Information Security Management Act and Office of Management and Budget mandates.**



**In 2011, the Office of New Reactors completed review of the first combined license applications for Vogtle and Summer.**



**In the 1930s, a failed experiment by a Swiss physicist for detecting gas using a radioactive source led to the discovery of smoke detectors when the scientist lit a cigarette and the detector registered a reaction.**



**Region II houses the Center for Construction Inspection for all new nuclear power plants and fuel cycle facilities.**



**It is estimated that if only 1 technical reviewer participated in a design certification application review, it would take him/her 32 years to complete the review.**



**Some lightning rods contain Radium-226 to make them more effective.**



**Nuclear pharmaceutical manufacturer Mallinckrodt Inc. is the only materials license holder in the country that is required by NRC to maintain an Emergency Plan.**



**Over 700 NRC employees responded to the events at Fukushima Dai-ichi and more than 20 NRC staff traveled to Japan as part of the NRC's "Japan Team."**



**The Office of Enforcement facilitated development of the Safety Culture Policy Statement and coordinates agency internal safety culture activities.**



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**The Region III materials program involves the oversight, inspection, and licensing of about 1,200 materials licensees in the Midwest.**



**Smoke detectors work because of radiation. They are an example of the beneficial uses of radiation and radioactive materials.**



**Inspectors from Region IV review activities in remote locations such as Guam, Saipan, Hawaii, northern reaches of Alaska, and on offshore oil well platforms.**



**Region IV staff members who inspect offshore oil well platforms must complete helicopter crash evacuation training.**



**On average, an allegation received by NRC contains two to three concerns.**



**At least two NRC resident inspectors who report to the appropriate regional office are located at each commercial nuclear power plant site.**



**Region IV covers about 75 percent of the surface area in the United States and 5 time zones.**



**NRC's Office of Nuclear Regulatory Research, the Office of Nuclear Reactor Regulation, and the Office of Nuclear Material Safety and Safeguards are congressionally mandated offices.**



**With six sites and 11 operating reactors, Illinois has more nuclear power plants than any other State.**



**NRC was the first Federal agency to give the public electronic access to all of its public documents through the groundbreaking system known as Agencywide Documents Access and Management System (ADAMS).**



**Currently, 59 domestic and 76 foreign organizations use MELCOR, NRC's system-level severe accident analysis code.**



**In the mid 1990s, oversight responsibilities for Grand Gulf in Region II and Callaway in Region III were transferred to Region IV.**



**The final safety evaluation report  
for the ESBWR design  
certification document contains  
about 3,800 pages.**



**Region I was struck by a rare tornado during a workday in November 1989. Fortunately, no serious injuries were reported.**



**The Office of Nuclear Security and Incident Response (NSIR) was established by NRC on April 7, 2002, to consolidate its safeguards, security, and incident response functions in response to the events of September 11, 2001.**



**The fastest growing use of nuclear materials in medicine is for diagnostic and cancer treatment procedures in veterinary medicine.**



**Most of NRC's computer codes are written in FORTRAN, a computer language that IBM first developed in the 1950s, and it is still one of the most popular languages in the area of high-performance computing.**



**The indicator lights in early appliances—such as clothes washers and dryers, coffeemakers, and stereos—used Krypton-85.**



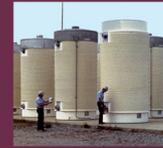
**On April 4, 1994, the Region V Office in Walnut Creek, CA, was closed, and their responsibilities were transferred to the Region IV Office in Arlington, TX.**



**During the Vogtle and Summer hearings, NRO staff consumed an estimated 1,037 and 816 cups of coffee, respectively!**



**The inspection and licensing of nuclear materials licensees in the geographical area of the Region II Office are performed out of the Region I Office in King of Prussia, PA.**



**NRC inspectors review the use of non-weapons radioactive materials possessed by the U.S. military and NASA.**



**On February 10, 2012, NRC issued two combined licenses for the construction of Vogtle Electric Generating Plants, Units 3&4. NRC issued the license for Units 1&2 in 1982.**



**NRC inspectors review the use of radioactive materials on pets at veterinary clinics .**



**Tritium gas is used to illuminate exit signs in buildings so they will function without power.**



**The Center for Nuclear Waste Regulatory Analyses at Southwest Research Institute was NRC's first—and so far only—Federally funded research and development center.**



**On September 28, 2002, staff from NRC Headquarters conducted the first workshop entirely in Spanish for the benefit of the Spanish-speaking audience for the medical community in Puerto Rico on the implementation of revised 10 CFR Part 35, Medical Use of Byproduct Material.**



**In 2012, all spent fuel, fuel racks, and fuel debris were successfully moved from the spent fuel pool to dry storage casks at the LaCrosse Boiling Water Reactor in Wisconsin. To ensure safety, Region III inspectors were closely involved throughout campaign. Decommissioning of the reactor can now begin.**



**The Office of Federal and State Materials and Environmental Management Programs consults with 31 Federally recognized Native American Tribes on proposed new uranium recovery projects in Wyoming, South Dakota, and Nebraska.**



**Most of the proposed uranium recovery projects use the in situ leaching process.**



**In 2012, decommissioning of the research and test reactor at the University of Illinois in Urbana was successfully completed. Region III inspectors confirmed through independent surveys that the reactor site was suitable for unrestricted release. The site was released for unrestricted use in January 2013.**



**NRC is currently working on a review for the Gerald Ford class aircraft carrier reactor plant.**



**The Office of Federal State Materials and Environmental Programs (FSME) approved 70 different smoke detector designs in 2012.**



**In August 2010, NRC issued its first uranium recovery license in more than a decade.**



**There are 566 Federally recognized  
Native American Tribes in the  
United States.**



**NRC's current resident inspectors have 2,435 years of combined nuclear experience, which includes 1,328 years of NRC experience and 1,108 years of also relevant non-NRC experience.**



**Sodium-free table salt alternatives contain potassium chloride, a portion of which is the radioactive isotope Potassium-40. Typical radiation contamination monitors used in nuclear power plants can readily detect the radiation emitted from this isotope.**



**NRC performs classified reviews of new Naval Reactor submarine and aircraft carrier reactor plants and provides advice to the Navy on the designs. This practice was initiated by President Kennedy in the 1960s.**



**Indian Point Unit 1 was licensed in 1962 and then shut down as an economic decision in 1974, partially because of NRC concerns regarding its emergency core cooling system.**



**This year marks the first  
attendance for the country of  
Denmark at the RIC.  
Velkommen!**



**The first Master Materials License was issued to the U.S. Air Force on June 26, 1985.**



**Three women, including our current chairman, Allison Macfarlane have held the title of Chairman, Nuclear Regulatory Commission. The other two are Shirley Jackson and Greta Dicus.**



**From 2007 to 2012, NRC received 68 petitions for rulemaking of which 21 were denied and 17 were either fully considered or partially considered in the rulemaking process. The remaining 30 petitions are under staff review.**



**During calendar year 2012, staff in NRC's Office of Nuclear Reactor Regulation conducted 28 exams and issued 119 licenses to reactor operators and senior reactor operators at the 31 research and test reactors licensed by NRC. Exams are administered on an as-needed basis upon request from a given facility.**



**In 2012, Region III organized several trips for its staff and other NRC officials to tour areas and components of the Zion Nuclear Power Station, which is being decommissioned. The tours have helped agency staff better understand the challenges of reactor decommissioning and permitted close observation of plant components not normally accessible during reactor operations.**



**In FY 2012, NRC received its first  
Small Business Administration  
scorecard letter grade of "A"  
representing the highest rating to  
date for the agency.**



**In the last 5 years, the Office of Nuclear Regulatory Research has issued 244 new or revised regulatory guides, withdrawn 43 guides, and determined another 48 guides to be acceptable as written.**



**The Atomic Energy Act was passed in 1946.**



**The NRC's first day of operation  
was January 18, 1975**



**This scientist who discovered  
plutonium was also a Chairman of  
the Atomic Energy Commission.  
Glenn T. Seaborg.**



**There are currently 37 agreement states.**



**A commissioner's term lasts for  
5 years.**



**The NRC Technical Training Center in  
Chattanooga opened in 1980.**



**The Indian Point Unit 1 plant had oil-fired boilers that superheated the steam generated by the reactor plant. It is the only plant in the United States ever licensed with this design.**



The chemical formula for  
yellow cake is  $U_3O_8$ .



**The country's first large-scale civilian atomic power plant—the Shippingport Atomic Power Station—started generating electricity for commercial use on December 18, 1957. It was located on the Ohio River.**



**In FY 2011 NRC awarded small business over \$90 million. This amount, with facilities maintenance and cyber security among the awardees, is the largest to date awarded by NRC.**



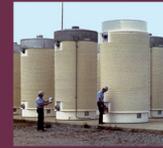
**New Mexico and Wyoming are the two states with the most locations of NRC-licensed uranium recovery facility sites.**



**The Commonwealth of Kentucky  
become the first Agreement  
State in 1962.**



**In 1992 Hurricane Andrew struck the Turkey Point nuclear power plant in Southern Florida. As a result, the NRC and FEMA entered into an MOU regarding emergency preparedness.**



**Radioactivity was discovered by  
Henri Becquerel.**



**Built in Arco, Idaho, the Experimental Breeder Reactor 1 was the world's first electricity-generating nuclear power plant.**



**NRC's longest serving commissioner  
was Commissioner Edward  
McGaffigan (11 years, 1996-2007).**



**In 2009, 17 percent of all NRC employees were veterans. As of February 2013, 21.3 percent of NRC employees were veterans. With a total of 818 veterans, 76 are female and 143 are disabled.**



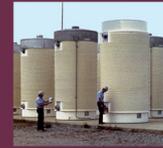
**Region I oversees 11 States.**



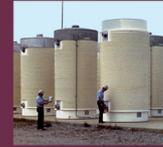
**At 1:50 p.m. on December 20, 1951, Experimental Breeder Reactor 1 became the world's first electricity-generating nuclear power plant when it produced sufficient electricity to illuminate four 200-watt light bulbs.**



**The largest contribution to our annual background dose is from Radon (roughly 55 percent).**



**NRC exceeded its goal to support service-disabled veteran-owned small businesses (SDVOSB) for the first time by awarding more than \$8 million to SDVOSBs.**



**The word “radioactivity” was  
coined by Marie and Pierre Curie.**



**U.S. utilities established a record in 1973 by requesting construction permits for 41 nuclear power plants.**



**The current NRC occupational dose limit is 5 rem/year.**



**There are 438 nuclear power reactors currently operating worldwide.**



**The most common nuclear power reactor type worldwide is pressurized light-water reactors.**



**The Region III materials program involves inspection, licensing, and oversight of about 1,200 nuclear materials licensees in the Midwest. Region III completes about 450 inspections and 950 licensing actions per year.**



**Fifty-three of the power reactors in the United States have operated over 30 years.**



**Every reactor operator must  
requalify every 2 years.**



**The NRC's State Liaison Officer  
Program was established in 1976.**



**NRC exceeded all five of its small business prime contract goals for the first time in FY 2012. The agency shares this accomplishment with only four other Federal agencies.**



**The original Atomic Energy Commission building was built in 1957 in Germantown, Maryland. The Department of Energy, with its headquarters in Washington, DC, uses this building as a satellite office.**



**On average, NRC expends 6,160 hours of inspection effort at each operating reactor site each year.**



**NRC has about 135 permanent onsite inspectors comprising 70 resident and 65 senior resident inspectors.**



**NRC consults with Federally recognized Tribes under the National Historic Preservation Act during the National Environmental Policy Act scoping period.**



**The Allegation and Enforcement Team actually handles allegations for the Offices of Nuclear Reactor Regulation, New Reactors, and Nuclear Security and Incident Response.**



**Three construction resident inspectors work full time at our Nation's new nuclear power plant construction sites, Vogtle Units 3 & 4, V.C. Summer Units 2 & 3 and Watts Bar. Their job is to ensure that the licensee constructs the facility in accordance with the conditions of their combined licenses and NRC's rules and regulations. More resident inspectors will be added at the sites as activity increases.**



**NRC consults with Federally recognized Tribes under the National Historic Preservation Act during the National Environmental Policy Act scoping period.**



**In an effort to increase communications with external stakeholders, Region III began an initiative to hold publicly available webinars on different topics. These include the results from the Palisades control rod drive mechanism special inspection and NRC perspectives on through-wall leaks at Palisades, with more planned.**



**In 2012, the Office of Nuclear Reactor Regulation supported a total of six foreign assignees—two from China’s National Nuclear Safety Administration, two from the Pakistan Nuclear Regulatory Authority, one from Japan’s Nuclear Energy Safety Organization, and one from the Czech Technical University.**



**NRC staff has reviewed about 200 emergency plans and implementing procedure changes since the publication of the “New EP Rule” in November 2011.**



Rulemaking is part of the Office of Federal and State Materials and Environmental Management's responsibility. The Atomic Energy Commission's first rule was published final March 20, 1947. It was Part 40 in Title 11 of the *Code of Federal Regulations*. The Commission's regulations were soon moved to Title 10.



**The first in situ recovery uranium recovery facility was licensed by NRC in 1978; originally known as the Irigaray Ranch Facility, it is now known as the Willow Creek Facility in Wyoming.**



**In 2012, NRC administered 42 operator licensing examinations at nuclear power plants which resulted in licensing 154 new reactor operators and 190 senior reactor operators.**



**An NRC-licensed conventional uranium mill was last operated in the United States in 1983.**



**In addition to Tritium,  
Promethium-147 and Krypton-85  
are approved by FSME for use in  
self-luminous exits signs.**



**In 2012, decommissioning of the research and test reactor at the University of Illinois in Urbana was successfully completed. Region III inspectors confirmed through independent surveys that the reactor site was suitable for unrestricted release. The site was released for unrestricted use in January 2013.**



**NRC supplies 24 States with potassium iodide (KI). Currently, these States store over 25 million tablets of potassium iodide. Nearly 4 million tablets were replaced due to expiration in 2012.**



**The Smith-Ranch Highland Uranium Project is the largest uranium recovery facility in the United States. The facility, which is licensed by the Office of Federal and State Materials and Environmental Management, is located in Wyoming.**



**The 50th Anniversary of the Atomic Safety and Licensing Board Panel occurred in 2012-2013. In November 1962, the first three-member Atomic Safety and Licensing Board was appointed by the then Atomic Energy Commission. The first Licensing Board evidentiary hearing was held in December 1962, and the first Board initial decision was issued in January 1963.**



**NRC is in the process of developing an agencywide Tribal Policy Statement. The comment period ends on April 1, 2013.**



**France leads the world in the highest percentage (~80 percent) of its electrical generator capability coming from nuclear.**



**Region III has a very robust and active student and youth outreach program. During FY 2012, Region III attended 16 outreach programs at local public schools and universities with about 49 Region III volunteers. These programs were attended by about 1,737 students and adults.**



**The Office of Federal and State  
Materials and Environmental  
Management currently manages eight  
NRC-licensed uranium recovery  
facilities.**



**The Office of the Chief Human Capital Officer was the first NRC office to occupy the new White Flint Three building.**



**Currently, 31 licensed research and test reactors are in the United States. The majority belong to colleges or universities.**



**In FY 2009, 19 percent of all new NRC hires were veterans. In FY 2012, 24 percent of all new NRC hires were veterans.**



**RIC 2013 is the first time  
the country of Kenya has a  
participant at the RIC.  
Karibu!**