



Last piece of steel for the Albuquerque Complex was placed



One of three new Aerial Measuring System aircraft



The subcritical experiment "Ediza" was executed by a tri-lab team



- ▶ The Albuquerque Complex was "topped out" – meaning the highest and last piece of structural steel was placed. The state-of-the-art facility is on track to be delivered in 2020, providing modern, safe, and reliable workspace to approximately 1,200 employees.
- ▶ The Nevada National Security Site completed the award and construction of NNSA's first new-construction, net-zero energy facility, Mercury Building 1, powered from the Mercury solar field.
- ▶ NNSA approved the conceptual design and cost range, or CD-1, for the Advanced Sources and Detectors (ASD) project. ASD will lead to a more robust stockpile stewardship program by generating high-speed, high-fidelity X-ray images of subcritical experiments to maintain the U.S. nuclear deterrent.
- ▶ NNSA held two job fairs in Washington, D.C. and hosted eight "Nuclear Security Enterprise Days" at universities across the country as part of a nationwide, integrated initiative with M&O partners to recruit the next generation of nuclear security experts. The two job fairs attracted over 2,500 candidates with approximately 100 tentative job offers made onsite.
- ▶ NNSA funded over \$100 million in grants and cooperative agreements with top universities across the country, such as the Stewardship Science Academic Alliances Program and the Minority Serving Institution Partnership Program.
- ▶ The joint NNSA/NASA Kilopower team won a Gears of Government Award for developing an electrical power source to support long-duration crewed missions on the Moon, Mars and destinations beyond.



Highest and last piece of structural steel placed at Albuquerque Complex



LANL resumed transuranic waste shipments to the Waste Isolation Pilot Plant



NNSA held first-ever hiring events in January and July



SRS personnel safely package downblended plutonium for shipment out of South Carolina



NNSA YEAR IN REVIEW

2019

YEAR IN REVIEW



YEAR IN REVIEW

- ▶ Administrator Lisa E. Gordon-Hagerty released NNSA's strategic vision documents, which identify key values, principles, mission priorities, and goals to ensure the agency is responsive to the Nation's nuclear security and strategic defense needs – outlining key deliverables to meet those goals.
- ▶ The W76-1 Life Extension Program was completed under budget and ahead of schedule, strengthening the Nation's safety and security by extending the warhead's service life from 20 years to 60 years.
- ▶ The W76-2 warheads were delivered to the U.S. Navy. A modification of the W76-1, the W76-2 provides a low-yield, sea-launched ballistic missile warhead capability as directed in the 2018 Nuclear Posture Review.
- ▶ NNSA signed a \$600 million contract for its first exascale supercomputer, El Capitan, slated to be delivered in 2022 at Lawrence Livermore National Laboratory to support NNSA's weapons programs.
- ▶ At Los Alamos National Laboratory (LANL), five developmental plutonium pits, a key component of nuclear weapons, were completed in support of NNSA's strategic effort to revitalize U.S. pit production capability.
- ▶ The Mixed Oxide Fuel Fabrication Facility (MOX) Project was terminated six months earlier than expected. MOX will be repurposed into the proposed Savannah River Plutonium Processing Facility.
- ▶ NNSA's Office of Nuclear Smuggling Detection and Deterrence (NSDD) celebrated 20 years of building global capabilities to detect, disrupt, and investigate the smuggling of nuclear and other radioactive material.
- ▶ NNSA completed its largest ever, multiyear removal campaign by transporting approximately 700 kilograms of excess highly enriched uranium (HEU) from the United Kingdom to the United States for downblending.
- ▶ U.S. industry producers were awarded \$60 million in FY19 to expedite the establishment of domestic supplies of molybdenum-99 produced without the use of HEU in support of NNSA's goal to minimize the use of HEU in civilian applications.
- ▶ Contracts were placed by Naval Reactors for reactor plant heavy equipment, including the lead ship reactor core, for the Columbia-class ballistic missile submarine. This milestone helps ensure the Navy remains on track to construct, test, deliver, and deploy the vessels on schedule.



NNSA released its Strategic Vision amongst several other governance documents



A \$600 million contract was signed for El Capitan, NNSA's first exascale supercomputer



20th Anniversary of the Office of Nuclear Smuggling Detection and Deterrence



The Accident Response Group held a pre-briefing



Photo illustration of a Columbia-class ballistic missile submarine



Construction of the Uranium Processing Facility at Y-12 remains on schedule



Integrated circuits fabrication plant at Sandia Labs



High Explosives Pressing Facility at Pantex

- ▶ Excavation was completed for placement of the massive concrete foundations for the Naval Spent Fuel Handling Facility in Idaho, which will replace a 60-year-old structure and maintain the Navy's ability to refuel and defuel submarines and aircraft carriers.
- ▶ NNSA launched its BUILDER software, revolutionizing government management of infrastructure and maintenance, and allowing the agency to track the status of over 3,000 buildings across the Enterprise.
- ▶ The NMMSS+ data dashboard, part of the Nuclear Materials Management and Safeguards System, was deployed to provide the status of all nuclear materials from coast to coast.
- ▶ Three new fixed-wing Aerial Measuring System (AMS) aircraft were acquired, improving the program's reliability and range in providing rapid, wide-area assessments of radiological or nuclear events anywhere in the continental United States.
- ▶ NNSA provided counterterrorism training and expertise in support of numerous major public events such as the Super Bowl, Boston Marathon, Macy's Thanksgiving Day Parade, and the Pan-American Games in Peru.
- ▶ Construction of the Uranium Processing Facility (UPF) at the Y-12 National Security Complex remains on budget and on schedule. UPF will replace an early-Cold War plant with a modern, more efficient, and safer facility for conducting HEU operations.
- ▶ The Kansas City National Security Campus used microreactor technology to create a type of Trigonox, which is used in the production of nuclear weapons parts but is no longer commercially available.
- ▶ NNSA announced an additional \$5 million investment in developing future employees to carry out vital missions at the Savannah River Site. The Workforce Opportunities in Regional Careers Grant supports programs at five post-secondary education institutions around the site, including its first historically black college or university, Claflin University.
- ▶ Sandia National Laboratories completed phase one of an upgrade at its facility responsible for making integrated circuits. The facility's new and modified equipment will enable NNSA to sustain production of microsystems for national security applications through 2040.
- ▶ Pantex Plant produced the first high explosive part at the new High Explosives Pressing Facility (HEPF) after NNSA authorized full-scale operations. The modern 45,000 square-foot facility replaces infrastructure that is over 50 years old, improving worker safety.
- ▶ Los Alamos National Laboratory completed 12 transuranic waste shipments to the Waste Isolation Pilot Plant.