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Nevada National Security Site named as finalist in R&D 100 Awards
Site recognized for its breakthrough Falcon Plasma Focus device

NORTH LAS VEGAS, Nev. – The Nevada National Security Site (NNSS) was named a finalist in the 2019 R&D 100 Awards for its breakthrough Falcon Plasma Focus (FPF) device, led by NNSS Senior Engineer Brady Gall.

The Dense Plasma Focus (DPF) system creates short, high-intensity neutron pulses, making it capable of detecting the presence of special nuclear material that may be hidden or inaccessible by visual inspection. However, DPF systems at the NNSS are large, stationary platforms. Developed by Gall, NNSS Technologist Joseph Bellow, Engineer Michael Heika and Master Technologist Michael Blasco, the FPF model is a compact, mobile version of the technology that can be easily transported and operated.

“The R&D 100 is internationally renowned as the premier award for recognizing the best of the best in game-changing technical innovations,” Gall said. “This brings the awareness of the FPF system to a whole new level and exposes this technology to a global audience of potential collaborators, sponsors and customers.

“With this recognition, I hope that our portable FPF technology will receive continued support to advance plasma science and nuclear physics research, create new business opportunities, and, most importantly, serve our nation as a reliable non-proliferation capability.”
The FPF represents a multi-year effort to utilize the technology for NNSS Defense Nuclear Nonproliferation missions and involves partnerships with scientists from Los Alamos National Laboratory (LANL); Sandia National Laboratories; Lawrence Livermore National Laboratory; the University of Nevada, Las Vegas; Powder River Geophysical; Alameda Applied Sciences; and Sigma Science/Keystone Global Engineering and Technology, Inc.

The R&D 100 Awards will take place Dec. 5, during the R&D 100 conference in San Francisco. The NNSS has previously won six R&D 100 awards for its 2018 Silicon Strip Cosmic Muon Detectors, 2017 Geometrically Enhanced Photocathodes, 2013 KiloPower with LANL, 2012 Multiplexed Photonic Doppler Velocimeter, 2010 Movies of eXtreme Imaging Experiments (MOXIE) with LANL and 2009 High-Resolution Holography Lens entries. NNSS was also a finalist for its Argus Fisheye Probe in 2015.

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The NNSS and its related facilities help ensure the security of the United States and its allies by: supporting the stewardship of the nation’s nuclear deterrent; providing nuclear and radiological emergency response capabilities and training; contributing to key nonproliferation and arms control initiatives; executing national-level experiments in support of the National Laboratories; working with national security customers and other federal agencies on important national security activities; and providing long-term environmental stewardship of the NNSS’s Cold War legacy.

The NNSS is managed and operated by Mission Support and Test Services LLC (MSTS). MSTS is a limited liability company consisting of Honeywell International Inc., Jacobs Engineering Group Inc., and HII Nuclear. The NNSS falls under the jurisdiction of the National Nuclear Security Administration (NNSA), an agency within the U.S. Department of Energy. The Site’s operations are government-controlled and contractor-operated, and are overseen by NNSA’s Nevada Field Office, headquartered in North Las Vegas.

For more information on the NNSS, visit www.nnss.gov.

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