



PROGRAM HIGHLIGHTS • AUGUST 2013

At NASA's Kennedy Space Center in Florida, the Ground Systems Development and Operations (GSDO) Program Office is leading the center's transformation from a historically government-only launch complex to a spaceport bustling with activity involving government and commercial vehicles alike. GSDO is tasked with developing and using the complex equipment required to safely handle a variety of rockets and spacecraft during assembly, transport and launch. For more information about GSDO accomplishments happening around the center, visit <http://go.nasa.gov/groundsystems>.

Test at Naval Station Proves Recovery Operations for Orion

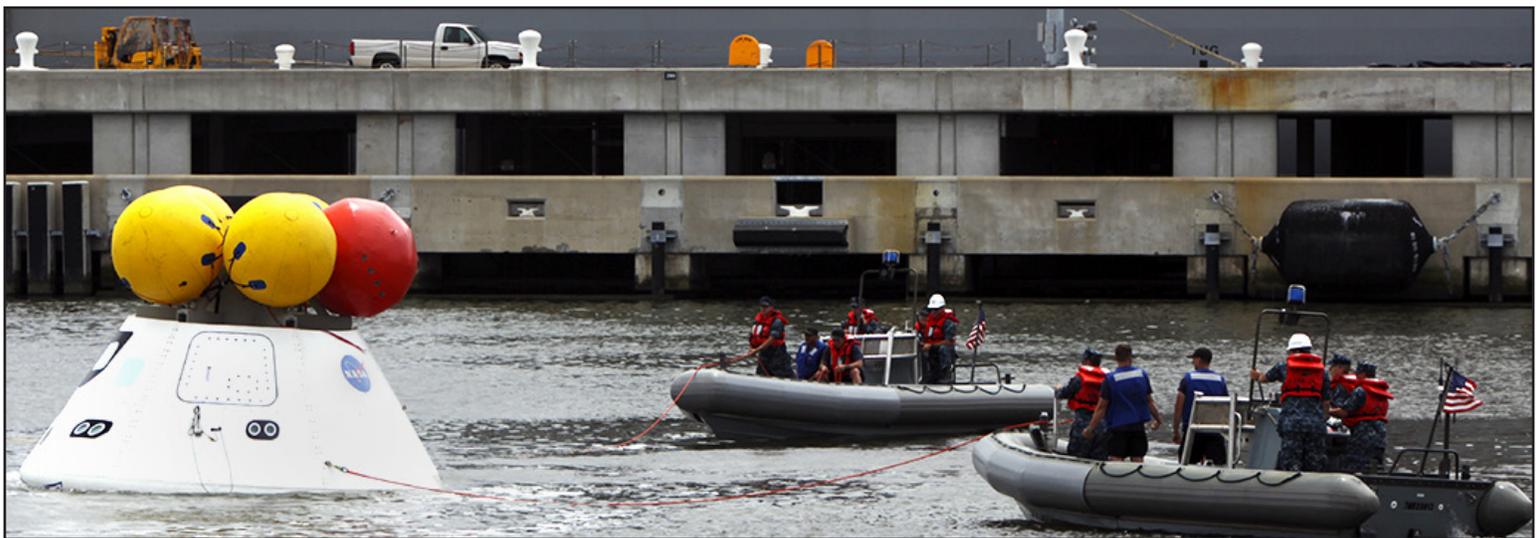
With the U.S. Navy's well deck ship USS Arlington stationed against its pier at Naval Station Norfolk in Virginia, divers in small boats approached a test version of NASA's Orion crew module. As part of a deliberate process, the divers attached tow lines and led the capsule to a flooded well deck. With the capsule in position over the recovery cradle, the water drained until the capsule settled.

The stationary recovery test is helping to ensure that when Orion returns from deep space missions and splashes down in the Pacific Ocean, the methods used to recover the spacecraft and obtain critical heat shield data are sound.

"Today marks a significant milestone in the Navy's partnership with NASA and the Orion Human Space Flight Program," said Navy Commander Brett Moyes, Future Plans Branch chief, U.S. Fleet. "The Navy is excited to support NASA's continuing mission of space exploration. Our unique capabilities make us an ideal partner for NASA in the recovery of astronauts in the 21st century — just as we did nearly a half century ago in support of America's quest to put a man on the moon."

In the sheltered waters next to a pier, the controlled environment test revealed how precise the positioning of

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NASA and the U.S. Navy conducted a stationary recovery test on the Orion boilerplate test article in the water near a U.S. Navy ship at the Naval Station Norfolk near Langley Research Center in Virginia on Aug. 15, 2013. Photo credit: NASA

the capsule can be over the cradle used to move the crew module, how long the recovery operation takes and how the taglines, winch lines and tow lines work.

“This allows us to practice our procedures in a benign environment with no ship movement and minimum wave action,” said Jim Hamblin, Landing and Recovery Element Operations manager in the Ground Systems Development and Operations (GSDO) Program.

Scott Wilson, Offline Processing and Infrastructure for Development manager in the GSDO Program, referred to the testing strategy as a “crawl, walk, run.”

“With this test, we are taking the first steps in learning to walk,” Wilson said.

The hardware used in the stationary test will be sent to the West Coast to prepare for a future test of Orion recovery operations in open water planned for January 2014. NASA and the DoD will use the recovery procedures employed in Norfolk to evaluate methods for next year's recovery operations test.

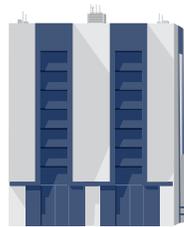
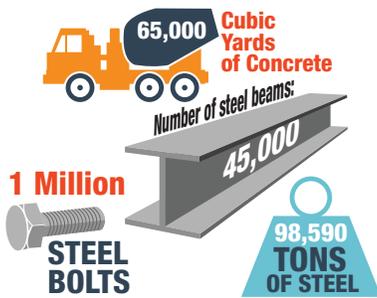
For the complete story, and to view a video of the Stationary Recovery Test, visit: <http://go.nasa.gov/16quSix>



The Orion boilerplate test article is returned to a U.S. Navy ship following a stationary recovery test in the water at the Naval Station Norfolk near NASA's Langley Research Center in Virginia on Aug. 13. Photo credit: NASA

Did you know...

NASA's Vehicle Assembly Building was constructed using:

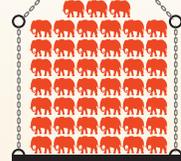


The VAB high bay doors are the largest doors in the world and take about 45 minutes to completely open or close.

The VAB high bay doors are **456 FEET HIGH**



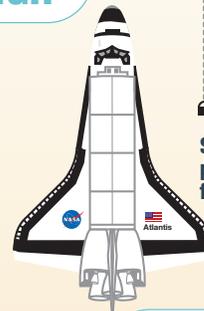
The VAB's 325 TON crane can lift



47 Full grown AFRICAN ELEPHANTS

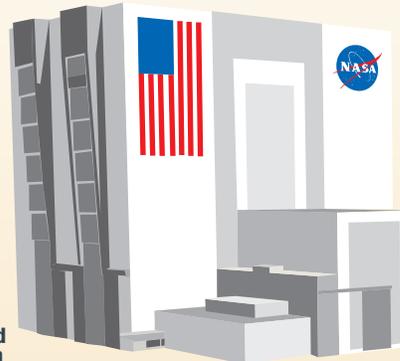
Space shuttles were prepared in the VAB for

135 MISSIONS



13

Saturn V rockets were processed for Apollo and the Skylab space station

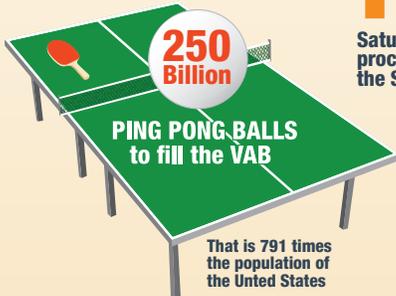


It would take

250 Billion

PING PONG BALLS to fill the VAB

That is 791 times the population of the United States



The American Flag on the front of the VAB is **209 FEET HIGH** and **110 FEET WIDE**. The blue field is the size of an NBA regulation basketball court



Each star is **6 FEET ACROSS**. Each stripe is **9 FEET WIDE**



It took **6,000** gallons of paint to originally paint the American flag and bicentennial logo on the VAB



By volume the **VAB = 3 1/2** EMPIRE STATE BUILDINGS

Infographic of the Vehicle Assembly Building. To view at a higher resolution or to download, click on the image.

KSC Honor Awards

The Kennedy Space Center Honor Awards Ceremony was held recently at the Kennedy Space Center Visitor Complex. Congratulations to the GSDO NASA and contractor employees who received recognition during the ceremony and were honored for their outstanding abilities and work products.

Center Director Award

Scott Colloredo

Certificate of Commendation

Patricia Nicoli, Lori Paule, Eric Perritt, Regina Spellman and Prentice Washington

Exceptional Administrative Achievement Medal

Joslyn Barroso

Exceptional Achievement Medal

Timothy Honeycutt, Michael Campbell, Philip Weber and Pedro Rodriguez

Outstanding Leadership Medal

Jeremy Parsons

Group Achievement Award

The GSDO SRR/SDR Team



Jeremy Parsons received the Outstanding Leadership Medal from Center Director Bob Cabana and Associate Director Kelvin Manning at the KSC Honor Awards Ceremony.

Employee Spotlight - Joy Huff



Joy Huff received a KSC Certificate of Commendation from Center Director Bob Cabana and Associate Director Kelvin Manning at the KSC Honor Awards Ceremony.

Joy Huff began her career with NASA at Kennedy Space Center in 1987 as a thermal protection system engineer on the Space Shuttle Program.

Currently, she is the thermal protection system engineer for the Orion Program.

Her primary responsibilities include engineering oversight for tile manufacturing at the Thermal Protection

System Facility, and tile installation and thermal barrier manufacturing at the Operations and Checkout Building (IOZ).

She received a Certificate of Commendation at the KSC Honor Awards Ceremony for outstanding engineering support on behalf of Kennedy Space Center for Thermal Protection Systems for the Commercial Crew and Orion Programs, and technology development initiatives.

Huff always wanted to be an aerospace engineer and work on the space shuttle.

She recently celebrated her 25th wedding anniversary with husband Steven, who is a United Launch Alliance manager for the Atlas program. She has three sons, Ryan, 13, Noah, 11, and Evan, 10.

Her first car was a red 1980 Ford Fairmont.

In her spare time, Huff enjoys exercising and scrapbooking, when she's not driving her sons all around to their activities – soccer, karate, and piano lessons.

To view a video of the Orion stationary recovery test, visit <https://www.youtube.com/watch?v=WBu7J3l2wfo>

To view the most recent Kennedy Now video, visit: http://www.youtube.com/watch?feature=player_embedded&v=eXXbWxNIIM