



GSDO

GROUND SYSTEMS
DEVELOPMENT & OPERATIONS

EXPLORATION BEGINS HERE



PROGRAM HIGHLIGHTS • JUNE 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>.



The boilerplate handling fixture bumper assembly was designed and manufactured at Kennedy Space Center for Orion recovery testing.

Fit Check Sets Stage for Orion Recovery Test

Engineers and technicians at NASA's Kennedy Space Center in Florida, Langley Research Center in Virginia and Lockheed Martin Space Operations in Denver, Colo., prepared unique hardware that was used in a fit check June 25-28 of equipment that will be used to recover Orion upon splashdown in the Pacific Ocean. The recovery operations are being led by GSDO.

For the first time, the crew module recovery cradle, the boilerplate handling fixture bumper assembly and the Orion boilerplate test article – a life-size test version of the spacecraft -- were assembled and tested in one place, at the "Trim Pad" near Langley.

The fit check is a preparatory step that leads to the actual Orion Stationary Recovery Test aboard a U.S.

Navy ship in Norfolk, Virginia, in early August. The fit check also allowed the team the opportunity to see how NASA procedures and hardware mesh with procedures and hardware developed by the Navy.

The handling fixture assembly was developed at Kennedy's Prototype Laboratory and manufactured at the center's Launch Equipment Test Facility by several Engineering Services contractors. It is the first piece of landing and recovery hardware to be completed and delivered to Langley in May.

It is a steel beam frame about 17 feet wide and 19 feet long with a bolt-on bumper assembly with cushions, or bumpers, that float up and down on guide rails. The assembly frame and bumper will be used to guide the Orion test article into the proper orientation over the handling fixture.

For the complete story, visit <http://go.nasa.gov/19YU2qB>.



Jeremy Parsons, chief of the GSDO Operations Integration Office at Kennedy Space Center, speaks to the media during a tri-program briefing in the Operations and Checkout Building high bay June 27.



New Flame Trench Will Support New Era at Pad B

For the first time since NASA's Apollo-era rockets and space shuttles lifted off on missions from Launch Complex 39 at Kennedy Space Center, one of the launch pads is undergoing extensive upgrades to support the agency's 21st century space launch complex.

At launch pad B, construction workers are removing the legacy flame deflector that sits below and between the left and right pad surface crawlerway track panels, along with Apollo-era bricks from both walls of the flame trench.

Constructed specifically for space shuttle launches, the current flame deflector was designed to deflect the rocket exhaust away from the launch vehicle and launch

pad to reduce the potential for damage. The flame trench bricks, which date back to the Apollo program, were installed during construction of the pad in the 1960s.

"A new universal flame deflector is being designed that will support NASA's Space Launch System rocket and a variety of other commercial launch vehicles," said Jose Perez Morales, the Pad Element project manager in the Ground Systems Development and Operations Program. "The bricks will be removed due to their age and because they are debonding from the flame trench structure."

For the complete story, visit http://www.nasa.gov/exploration/systems/ground/pad_b_flame_trench.html



NASA Associate Administrator Robert Lightfoot toured several facilities June 4, during his visit to Kennedy Space Center, including Launch Pad 39B. From left are Alan Littlefield, Vehicle Integration and Launch chief engineer; Jose Perez Morales, launch pad project engineer; Lightfoot and Kennedy Director Bob Cabana. Lightfoot also toured the Vehicle Assembly Building, the Cryogenics Laboratory, Swamp Works and the Ka-Band Objects Observation and Monitoring antenna testbed array. He also participated in an All Hands meeting and a question and answer session.



Upgrades continue to crawler-transporters 1 and 2
 Above: Technicians are removing the cover plates in preparation for replacing the roller bearing assemblies on CT-2. The modifications are designed to ensure CT-2's ability to transport launch vehicles currently in development, such as NASA's Space Launch System.

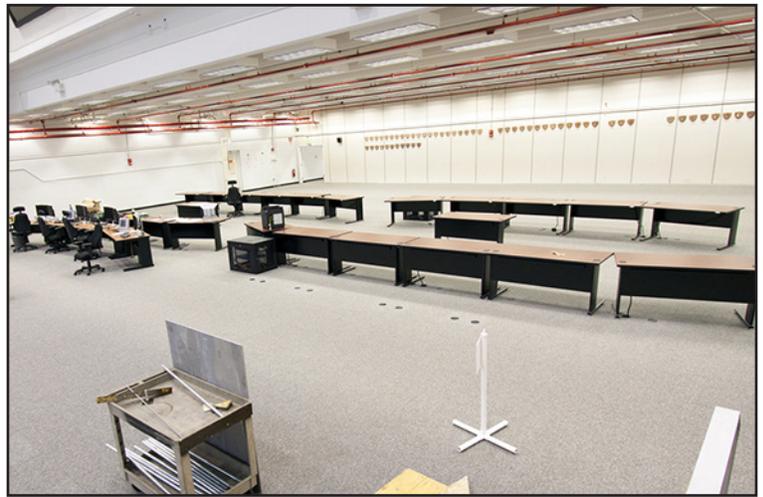
At right: Technicians installed the piping for a new exhaust system in crawler-transporter 1, or CT-1. Work continues in high bay 3 to upgrade CT-1 as part of its general maintenance. CT-1 could be available to carry commercial launch vehicles to the launch pad. The crawler-transporters carried the mobile launcher platform and space shuttle to Launch Complex 39 for space shuttle launches for 30 years.



Inside the Launch Abort System Facility at Kennedy Space Center, a technician prepares the launch abort motor for connection to the attitude control motor. Both are segments of Orion's Launch Abort System, which is designed to safely pull the Orion crew module away from the launch vehicle in the event of an emergency on the launch pad or during the initial ascent of NASA's Space Launch System.



In the transfer aisle of the Vehicle Assembly Building at Kennedy Space Center, a full-size test mock-up of the Orion spacecraft has been lowered onto a transporter. Crane operators and technicians practice de-stacking operations on mock-ups of the Orion spacecraft and launch abort system in order to keep processing procedures and skills current.



Upgrades continue to Firing Rooms inside the Launch Control Center. At left, wiring and conduits below the floor have been upgraded in Firing Room 2. The legacy flooring was removed and new flooring is being installed. At right, modifications continue to Firing Room 3. The legacy flooring was removed and new flooring has been installed. Some of the new work stations are being positioned for installation in the room.



Elizabeth with her Silver Snoopy Award, recognized by, from left, Center Director Bob Cabana; Ronnie Rodriguez, acting division chief; and NASA astronaut Dan Burbank.



On June 7, NASA's prestigious Silver Snoopy Award was awarded to Jose Perez Morales, Launch Pad 39B element senior project manager, Juan Gordon, a program analyst, and Elizabeth Kline, an analysis lead, for outstanding leadership and support to NASA's Kennedy Space Center and GSDO. Top photo: Jose with his Silver Snoopy Award recognized, by, from left, Center Director Bob Cabana; Steven Milton, Offline Processing and Infrastructure branch chief; and NASA astronaut Dan Burbank. Bottom photo: Juan with his Silver Snoopy Award recognized by, from left, Center Director Bob Cabana; Rob Yaskovic, Program, Planning and Control division chief; and NASA astronaut Dan Burbank.

Employee Spotlight – Rob Yaskovic

Began NASA Career: 1991
 Title: GSDO division chief for Program, Planning and Control
 Primary responsibilities: Budget execution and financial management, program board/panel integration and management; configuration, schedule and risk management; and IT support. Also heavily involved in the Exploration Systems Integration effort.
 Wanted to be: Military pilot
 Family: Married to wife Robin, two children, ages 10 and 12
 Pets: two dogs, a corn snake and a gecko
 First car: 1980 Honda Civic
 In his spare time: Likes to run and attend his children's sporting events.

