



GSDO

GROUND SYSTEMS
DEVELOPMENT & OPERATIONS

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PROGRAM HIGHLIGHTS • DECEMBER 2013

Emergency Egress Vehicles Arrive at Kennedy

With crewed launches on NASA's Space Launch System (SLS) and Orion spacecraft approaching, the Ground Systems Development and Operations (GSDO) Program at Kennedy Space Center in Florida led the effort to select an emergency egress vehicle that future astronauts could quickly use to leave the Launch Complex 39 area in case of an emergency. The first of four refurbished Mine-Resistant Ambush-Protected (MRAP) vehicles was shipped from the U.S. Army Red River Depot in Texarkana, Texas, and arrived at the center Dec. 5.

During crewed launches, the MRAP will be stationed by the slidewire termination area at the pad. In case of an emergency, the crew will ride a slidewire to the ground and immediately board the vehicle for safe egress from the pad. The existing bunkers around the pads would be used only if evacuation was not possible.

All four vehicles were transferred from the Army at no cost to NASA. As each one arrives, they will be processed in and then transported to the Rotation, Processing and Surge Facility near the Vehicle Assembly Building for temporary storage. The vehicles will undergo some modifications to meet NASA's emergency egress requirements.

Danny Zeno, a GSDO operations integration engineer, led a two-year study of several emergency egress concepts with a team of people from NASA centers and programs. The team selected the slidewire system and the Army's MRAP Caiman, a military vehicle that



The first of four new emergency egress vehicles, called Mine-Resistant Ambush-Protected, or MRAP, vehicles arrived at Kennedy Space Center in Florida from the U.S. Army Red River Depot in Texarkana, Texas.

was used for operations in Iraq and Afghanistan.

"This is definitely an upgrade from the space shuttle-era M-113 tank design," said Zeno. "Working across agencies helped us to select the most versatile vehicle possible for NASA's purpose."

The 40,000-pound, heavy-duty vehicles will provide protection against chemicals and projectiles that could be carried through the air during a catastrophic event at the pad.

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



Inside the Vehicle Assembly Building at Kennedy Space Center, preparations are underway to lower crawler-transporter 2 from jack stands so that work can begin to reinstall the large crawler tracks on Dec. 3. The crawler is being prepared for rollout in January 2014 to test the new bearings that were recently installed.



NASA Advisory Council members get an up-close look at modifications to Launch Pad 39B Dec. 11 during a tour of Kennedy Space Center in Florida.



Crawler-transporter 1 approaches the top of Launch Pad 39A after traveling along the crawlerway at Kennedy Space Center on Dec. 3. New jacking, equalizing and leveling, or JEL, hydraulic cylinders were installed on CT-1 and are undergoing a leveling and turning test as the crawler travels along the slope. Photo credit: NASA/Daniel Casper

Employee Spotlight - Eric Perritt

Eric Perritt is an Operations Integration engineer in the GSDO Program at Kennedy Space Center. Perritt has worked at the center for 19 years and was selected as GSDO Employee of the Month for December.

He started as a volunteer in 1994 and was subsequently hired in the Payload Processing Directorate.

For GSDO, Perritt's main responsibility is integrating various Operations groups to prepare for reviews such as the Preliminary Design Review (PDR), Critical Design Review (CDR) and Operational Readiness Review (ORR). He also integrates the operations teams to produce an overall GSDO Flight Processing Integrated Timeline depicting all of the activities the program will be responsible for in order to process NASA's Space Launch System (SLS) and Orion vehicles. He also supports cross-program activities such as preparing for the Certification of Flight Readiness.

The CDR demonstrates that the maturity of the design is appropriate to support a full-scale fabrication, assembly, integration and test. It also determines that the technical effort is on track to complete the system development, meeting performance requirements within the identified cost and schedule constraints.

The SAR verifies the completeness of the specific end products in relation to their expected maturity level, assesses compliance to stakeholder expectations, and ensures that the system has sufficient technical maturity to authorize its shipment to the designated operational facility or launch site.



The ORR ensures that all system and support (flight and ground) hardware, software, personnel, procedures, and user documentation accurately reflect the deployed state of the system and are operationally ready.

One of his recent major tasks was the coordination and integration of the Architecture and Operations portion of the PDR. He also worked with others to coordinate an approach for GSDO to achieve the System Acceptance Review/ORR reviews and is working across programs (SLS and Orion) to establish processes to ensure consistent and accurate input to the integrated timeline.

Perritt's first car was a 1984 white Mercury Cougar. He enjoys working out, traveling, going to the beach, watching football (especially Penn State games) and science fiction, and playing strategy games.

He has one dog that he adopted four years ago, a Siberian husky named Oginalli

His parents and a brother live near Syracuse, N.Y., and his sister lives in Atlanta.



An aerial view of the Vehicle Assembly Building, or VAB, in the Launch Complex 39 area at Kennedy Space Center in Florida. The Launch Control Center is in front of the VAB. To the right is the mobile launcher that will be used to transport NASA's Space Launch System rocket and the Orion crew capsule to Launch Pad 39B.

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