Space Systems Company–Michoud Operations

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Bryant sees opportunities for ET's continued success

Succeeds Sigur as ET vice president

New External Tank Program Manager Mark Bryant stands beside ET-130, which is scheduled to ship to Kennedy Space Center in November.

On October 6, **Mark Bryant** took over as vice president of the External Tank Project, succeeding **Wanda Sigur** whom Lockheed Martin had named vice president & deputy of Space Systems Engineering.

Bryant believes Michoud has real opportunities ahead to be successful, and credits employees with doing a lot of work to put themselves in this position.

"We're still working to put these new Return to Flight enhancements in the right place in the production flow, but I'm really encouraged by what I see on improvement with through-put, and the quality of the tanks is improving with the number of non-conformances coming down. And tank flight performance and pre-flight performance are just outstanding."

Going back to a fundamental understanding of foam systems, he says it's amazing the level of maturity employees have brought to the subject and how they've translated it to hardware.

"So we're really poised to succeed. But we also have challenges. Day in and day out, technical performance of the tank is first. As it stands right now, we're looking to fly out by 2010, and we've got a lot of hardware to deliver."

Bryant understands it will be a tumultuous time for some as they roll off ET, but believes the company is working hard so employees can go to another program or somewhere else in Lockheed Martin or get training for another skill in the New Orleans area.

"We've got to help keep people focused on the technical performance of the hardware, the quality of the build, hitting our schedule marks – these challenges will be with us to the end."

The new ET program manager believes that "we can never take technical performance for granted or quality of the hardware. We spend a lot of effort and attention on processes and systems to assure that when that tank goes out the door and flies that it's going to perform beautifully and meet all requirements and be a safe product."

Will there be another shuttle mission added to the manifest after these ten flights? Bryant believes the new administration along with NASA may make that decision next spring or summer on whether to fly the Alpha Magnetic Spectrometer to the space station. And he says he knows that it will soon be time to accommodate Constellation programs on the floor.

Finally, in terms of communicating with employees – "Manny and Wanda have set a new standard and expectation of the level of interaction that we have with all the employees, and I plan to continue that." ■

NASA moves ahead on *Ares V*

NASA has taken one of the first significant steps in returning Americans to the moon for the first time in almost four decades.

At an Industry Day in Washington D.C. on September 25, NASA released its plans for the Constellation Lunar architecture elements, most notably the *Ares V* launch vehicle and Altair lunar lander programs.

Jeff Hanley, NASA Constellation program manager, provided an overview of program activities and reported that the recent Lunar Capability Concept Review forecasts a capacity well beyond that of the Apollo program. NASA's planned Constellation Lunar elements will deliver to the moon's surface a crew double the size and capable of staying twice as long as the Apollo missions. In addition, they will be able to land anywhere on the lunar surface and return at any time.

By moving forward with a robust Constellation Lunar program, Hanley hopes to assist in the transition of personnel and resources as the Space Shuttle program flies out in 2010.

Steve Cook, NASA manager of the *Ares* Launch Vehicle Office, and **Clinton Doris**, Altair program manager, provided overviews of the *Ares V* launch vehicle and Altair Lunar Lander point of departure designs that highlighted each vehicle's performance characteristics and changes since the initial Exploration Systems Architecture Studies in 2005.

In the case of *Ares V*, both the vehicle core and Earth Departure Stages grew in diameter, the Space Shuttle Main Engine was replaced with the RS-68 engine, and the Solid Rocket Boosters expanded to 5.5 meter segments.

NASA will continue to lead the design efforts with support from multiple contractors on Phase 1 preliminary design and definition work. Stressing that the agency is far enough along to begin initial procurements on both *Ares V* and Altair in 2009, Hanley shared near-term procurement plans for both the *Ares V* and Altair programs.

NASA plans two procurements in 2009, one each for *Ares V* and Altair, supported by more in-depth industry days for each project in November. The *Ares V* Phase 1 procurement will offer five work packages including: Core Stage, Earth Departure Stage, First Stage, Avionics and Payload Shroud. Requests for Proposals will be released in January 2009, and multiple awards for each work package will occur in the spring, with work starting shortly thereafter. The period of performance for the initial preliminary design support work is from 2009 to 2012, beginning with an 18-month base period and two 12-month options. NASA plans to select the Phase 2 prime contractors for completion of Design, Development, Test & Evaluation and production activities for each of the work packages after it conducts the Systems Definition Review, currently planned in mid-2012.

"The *Ares V* Phase 1 procurement is an excellent opportunity for Lockheed Martin," says **Ron Wetmore**, MSFC Exploration Systems vice president. "Winning contractors will provide input to ensure the NASA design for *Ares V* takes advantage of our lessons learned and results in a more producible, operable, and therefore, affordable vehicle." ■

Hubble to launch next year

When Side A of the science data formatter malfunctioned on the Hubble Space Telescope September 27, effectively stopping the transmission of images from space, NASA's Space Shuttle manifest turned upside down.

NASA immediately delayed the STS-125 Hubble servicing mission set for October 10. And STS-126 – the designated launch-on-need Hubble flight – returned to its original mission, flying to the International Space Station on November 14.

After several weeks of testing, NASA attempted to transition to redundant Side B of the 18-year-old science data formatter so Hubble's instruments could resume operations. As of press time, that transition encountered additional problems. The agency continues to investigate the best solution for Hubble.

One distinct possibility is to fly the only back-up replacement system available for the science data formatter and have astronauts install it during the Hubble servicing mission, whenever that flight takes place next year. NASA expects to finish testing the replacement system in January.

So beginning next year, the launch schedule now includes the STS-125 Hubble mission, along with STS-119, originally scheduled to launch February 12, and STS-127, originally scheduled to launch May 15. NASA likely will select either STS-119 or STS-127 to serve as the rescue vehicle for the Hubble flight.

Meanwhile, the Hubble stack composed of *Atlantis* and ET-127 rolled back from Launch Pad 39A to the Vehicle Assembly Building at Kennedy Space Center on October 20.

This cleared the way for *Endeavour* and ET-129 (STS-126) to roll one mile on October 23 from Launch Pad 39B to 39A and prepare for its November 14th mission to the space station where the crew will deliver a water recycling system, a new kitchen and second sleeping quarters and toilet so that the station crew can double from three to six members next year.

Endeavour and STS-126 are scheduled to launch at about 6:55 p.m. Central Time. ■

Shuttle* Discovery, *which placed the Hubble Space Telescope in orbit in 1990, docks with Hubble on the third servicing mission in 1999.

ET-130 moves to Test & Checkout

Transportation & Handling moves ET-130 from Final Assembly on October 17 to Building 420 where the tank will spend about a month in Test & Checkout before shipping out to Kennedy Space Center. ET-130 upgrades include revising the Liquid Oxygen feedline yoke base spray closeout and revising trim dimensions in other closeout areas. The delivery due date for the tank is November 21, but employees plan to beat that date and have already recovered much of the Hurricane Gustav schedule impact. Currently, ET-130 is scheduled to fly on the STS-119 mission next year and also serve as the launch-on-need tank for the STS-125 Hubble mission.

NASA recognizes Gustav Ride-Out Crew

In a ceremony held at Michoud on October 14, Marshall Space Flight Center Director **Dave King** thanked Hurricane Gustav Ride-Out Crew members and presented each with a plaque commemorating their extraordinary service.

"The business we're in is difficult, and there is very little margin for error," King said. "If we don't have the facility putting out good hardware, we don't fly. I recognize the sacrifice you made and very much appreciate it. What you guys did was pretty amazing."

Led by Facility Operations & Services Senior Manager **Steve Ehrlicher**, Lockheed Martin's 39 representatives on the Ride-Out Crew performed with distinction. "I was very appreciative of Dave King and **Sheila Cloud** recognizing the accomplishments of the all-volunteer Michoud team that successfully rode-out Hurricane Gustav," Ehrlicher stated.

"We truly were a team – NASA, Lockheed Martin, Coastal Security and the Coast Guard – focusing on the common goal of preparing this critical manufacturing asset for an anticipated major hurricane event and then ensuring a safe and rapid return to normal operations," he continued. "To a person, we all take tremendous pride in our respective roles in the nation's space program and were equally proud to do our part to continue that success into the future."

Fortunately, Gustav inflicted only minor damage to the facility and no damage to flight hardware. According to **David Reese**, an LM system control mechanic, a great deal of work went on in the cells post-storm to get ET critical systems up and running again. "We worked hard to check out the systems and repair and replace any damage to infrastructure."

The team performed with excellence after the storm, fixing much of the wind damage while making sure safety was a priority. EMT Paramedic **Marlene Theriot** summed up the focus on safety by saying she gave out only one Band-Aid.

After the recognition ceremony, Ride-Out Crew member **Miles Aurthur** commented, "It's nice to be recognized for doing something extra. My wife safely evacuated and because of her support, I was able to be here for the storm and help take care of the facility." ■

Members of the Hurricane Gustav Ride-Out Crew with their commendations are first row from left: Robert Poche, Guy Jackson, Paul Herrin, Miles Arthur and David Morrow. Second row: Marlene Theriot, Alan Rovira, David Dyer, Donnie Bollich, Nick Jones, Gino Saladino, Greg Hanrahan, Billy Hale, David Clampitt and Dave King (MSFC director). Third row: David Reese, Greg Lain, Glenn Marx, Joe Tardy, Pat Shea, Jason Cobden, Steve Ehrlicher, Russell Crawford, Michael Parquet, Mike Javery (Operations VP), Steve Francis and Greg Heaslip. Not pictured: Joe Barrett, Ed Cummings, Josh Goyette, Leon Harrache, Eugene Harris, Will Henderson, Manual Johnson, Joe Kennedy, Cornell Mathieu, Kevin Pace, Richard Roberts, Vickie Schmersahl, Dave Turnage and Byran Walker.

Rendezvous Website expanding

Rendezvous, the NASA on-line quarterly magazine about Transition from shuttle to Constellation, is expanding to get news to readers on a more regular basis. One of the new features is a rotating leadership blog. Shuttle Manager **John Shannon** is first. And there's a button for comments or questions.

At http://rendezvous.jsc.nasa.gov, you'll also find:

- an article on NASA's update of the Workforce Transition Strategy Report, released to Congress earlier this month (click on "Transition News")
- all the Transition links gathered into one central location
- and a link to *Rendezvous* magazine

Other new features will include a Space Shuttle Wiki, to contribute memories to the Space Shuttle story, and Rumor Busters, where the editor will investigate transition-related rumors. Plus, the next issue of *Rendezvous* magazine features some shuttle employees getting hands-on Constellation experience.

Hit "Subscribe" to update the site. ■

Michoud shows off its technology capabilities

Technical Interchange has win/win potential

With 35 years of experience producing hardware for America's Human Space Flight program, Michoud Operations has developed unique cutting-edge technologies, capabilities and skills that meet critical customer requirements.

Johnson promised to promote the technologies to engineers across all business units of the corporation.

To accomplish that, Michoud Operations conducted a Technical Interchange Meeting on October 21-22 with over 35 vice presidents and technology officers attending the forum, which was endorsed by the corporation as a model for horizontal integration. Participants brought specific requirements from their programs and an open mind as to how Michoud technologies could potentially be of benefit to them.

Michoud engineer Mike Eller demonstrates a titanium weld on the Friction Stir Weld PDS machine to Lockheed Martin technology leaders.

These technologies have the potential to be a key discriminator for current or future programs around the corporation – provided engineers know they exist.

Dr. Ray Johnson, Lockheed Martin senior vice president & Chief Technology Officer, visited Michoud earlier this year and came away impressed with the offerings he saw.

Michoud engineers briefed and demonstrated a variety of topics including Friction Stir Welding, composites, hybrid propulsion, Thermal Protection Products and WorkShare opportunities for attendees.

"The event could be a potential win/win for Michoud and the corporation," explained event coordinator **Michael Gnau**, deputy director, Program Management & Advanced Programs. "Any additional work that comes to Michoud will help retain critical skills, and corporate programs could benefit from the technologies developed at Michoud." ■

Engineer Duy Pham demonstrates an aluminum weld on the NCAM Universal Weld System.

Lockheed Martin donates laptops to students

Saying "It takes technology to make technology," Vice President **Manny Zulueta** presented laptop computers to 8th graders at Agnes Bauduit Elementary in New Orleans on September 26 as a signal that Lockheed Martin is committed to the education of America's future technology leaders.

In all, Space Systems Company donated 1,200 laptop computers to the New Orleans Recovery School District (RSD) to reach every 8th grade student. Previously, the company had donated $95,000 to the RSD to purchase specific curriculum-based software so students could use the computers to support their studies.

Manny Zulueta presents a Lockheed Martin laptop computer to 8th grader Raven Madison.

"This is just one of many ways that Lockheed Martin and its employees are investing in our most valuable resource, our children," Zulueta added.

Louisiana Education Superintendent **Paul Pastorek** called the contribution "the lifeblood of the community."

Jermaine Bailey checks out his new computer. Lockheed Martin donated 1,200 laptops to all 8th graders in the Recovery School District.

The donation was the culmination of a year-long effort to collect surplus laptops from all across Space Systems. Lockheed Martin sent the computers to a non-profit computer recycler in Baton Rouge, Capital Area Corporate Recycling Council, who refurbished them and loaded operating system software onto the machines.

"We know that in our information-based society, a computer is a powerful educational tool," Pastorek asserted. "Yet, it's one that is out of reach for many families who can ill afford to get laptops for their children to work on their schooling. By putting these laptops into the hands of our 8th graders, Lockheed is helping our children compete with everyone on a level playing field."

RSD Superintendent **Paul Vallas** called the gesture "a generous gift from Lockheed Martin that lets us take our classroom modernization initiative one step further by providing laptops to all our 8th grade students." He said technology is the key to closing the achievement gap in the 67 RSD schools. ■

Are you Safe?
"Doing it Safely" campaign winners

Ken Nicosia in Facility Operations & Services wins the September Grand Prize in the "Are you Safe? Doing it Safely" campaign that runs through November.

He captured the award for discovering a potential 440V electrical hazard in the production weld area and for taking steps to mitigate the hazard by reporting it. Nicosia noticed that the servicing machine 440V cord below the plate decking was not secured properly or notched out to prevent the wire from becoming frayed. In alerting his supervisor, Nicosia demonstrated a personal commitment to safety and avoided a potential electrocution hazard for fellow employees.

The Doing it Safely promotion is designed to encourage employee safety by rewarding those who work safely. Employees who are observed performing safe work may be recognized by Safety and receive gift cards that are redeemable for a designer hat or backpack.

Grand prize winner Ken Nicosia

Bi-weekly winners and one monthly Doing it Safely Grand Prize winner will be recognized in future issues of *Info SPACE* and the next issue of the *Mission Success Bulletin*.

The following are bi-weekly winners to date:

- September 12 – Ricky Michel
- September 26 – Darrell Lincoln

Diversity Champions named

Do you know someone who deserves special recognition for creating an environment where all employees feel welcome? So far this year, Michoud Operations employees have honored three fellow employees as Diversity Champions: **Carolyn Baringer** in April, and **Karen France** and **Marjorie Bilinski** in October.

The goal of the program is to honor "unsung heroes" who make Space Systems an inclusive environment.

Diversity Champions receive a monetary Special Recognition Award and are highlighted in publications and on the Space Systems Diversity website. They demonstrate inclusiveness by:

- Communicating in ways that are respectful and inclusive
- Encouraging open discussions on diversity that can lead to new perspectives, and minimize biases and prejudices
- Recognizing individual differences as a source of strength, and encouraging all team members to participate
- Setting standards of behavior that encourages a work environment, and values fairness and tolerance

To nominate an employee, submit your nomination via Diversity Website (VPN required) at: http://diversity.ssc.lmco.com/awards_pages.cfm

Diversity Champions Marjorie Bilinski (left) and Karen France

This year's Diversity Day on October 30 will have three components – all voluntary – during departmental lunch periods:

- Bring your favorite cultural dishes from a variety of countries to potluck luncheons
- Play a Generational Jeopardy game
- Complete military appreciation postcards to be mailed to deployed personnel

For more information, contact **Pat Powell** at 7-0694 or patricia.a.powell@maf.nasa.gov. ■

Farewell to Wanda

Amolak Singh who worked with **Wanda Sigur** for many years in the Design group wishes her the best at her farewell party October 20. The former ET program manager was named Space Systems vice president & deputy of Engineering on October 6 and will soon move to Denver. Wanda walked through the Michoud gates and began her Lockheed Martin career 29 years ago as a materials engineer.

She has served in a number of capacities from Super Lightweight Tank team lead to Engineering & Technology Laboratories director to Return to Flight deputy manager. ■

Team incident/accident-free for two years

Twenty-four months and counting.

Operations Vice President **Mike Javery** and Materiel Sourcing Director **Rey Abadie** recently honored the Physical Distribution team at Michoud with a Safety Recognition breakfast for marking two years of incident/accident-free work. The team is responsible for Receiving, Shipping, Property Disposal, Traffic/Freight Payment and Records Retention.

A cornerstone of the team's success is using the Human Error Prevention process, including huddles prior to critical activities, staying focused on their surroundings and following all other safety measures. Team members believe "Being safe is no accident."

Safety is practiced 24/7 in the department, and employees take their on-the-job training and safety experience home with them too. ■

Two years without an accident or incident – members of the Physical Distribution team include Brian Schmitt (seated from left), Christi Welsh, Alvin Lewis, Bryon Poree and Jeffrey Scholl. Second row: Clifford Jiles, Justin Taylor, Jim Lasecki, Carl Saunders, Thomas Wilson, Marianne Dann, Terry Mars and Kelly Martin. Back row: John Washington, Randy Wiggins, Genetta Price, Craig Coleman and Brian Sollberger. Not pictured are Robert Lyons, David Matherne, Bill Pollard, Dee Willick and Warren Wilson.

Milestones *Employees celebrating anniversaries with Lockheed Martin in November 2008*

35 Years
Reshelle Beslin

30 Years
Mike Balch
Susan Bullington
John LaBorde
Jo Ann Lyons
Bill Olson

25 Years
Anita August
Kenneth Ezell
Ester Hall
Woon Lee
Peter Smith
David Otto
Jacqueline Yenchick

20 Years
Nicky Parr
Todd Turner
Andrew Thompson
Elmer Wiggins
Joseph Wooley

15 Years
Randy Stevens

10 Years
Irina McAllister
Bobby Morgan
Alex Pagnutti
Richard Patterson

5 Years
Merideth Beech
Peter Bordes
Lawrence Boteler
José Bueiz
James Deschenes
John Dobson
Paul Embry
Salome' Hector
Manuel Johnson
Jesse Lamonte
Paul Macaluso
William McInnis
Jason Niemann
Gina Occhipinti
Chu Pak
Ward Rietz

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Director of Communications: Marion LaNasa

Editor: Harry Wadsworth

Graphics, Photography: Eric Bordelon, Dave Higginbotham, Chip Howat, Jon Irving, Shannon Jurado, NASA, Brian Peterson, Steve Seipel

Contributors: Kevin Barré, Chip Howat, Marion LaNasa, Linda Leavitt-Bell

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