



# michoud messenger

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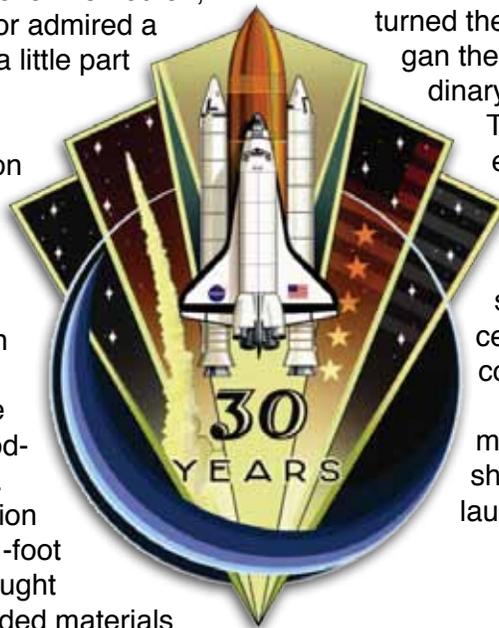
## End of an Era

Space Shuttle Atlantis touched down July 21 bringing to a close 30 years of space shuttle flights.

“Although we got to take the ride,” said Commander Chris Ferguson on behalf of his crew, “we sure hope that everybody who has ever worked on, or touched, or looked at, or envied or admired a space shuttle was able to take just a little part of the journey with us.”

The STS-135 crew consisted of Ferguson, Pilot Doug Hurley, Mission Specialists Sandra Magnus and Rex Walheim.

On the 13-day mission, the STS-135 crew delivered to the International Space Station more than 9,400 pounds of spare parts, spare equipment and other supplies in the Raffaello multi-purpose logistics module, including 2,677 pounds of food. The supplies will sustain space station operations for the next year. The 21-foot long, 15-foot diameter Raffaello brought back nearly 5,700 pounds of unneeded materials from the station.



## The Final Space Shuttle Landing

During the final landing of the space shuttle, we had the rare opportunity to witness history. We turned the page on a remarkable era and began the next chapter in our nation’s extraordinary story of exploration.

The brave astronauts of STS-135 are emblematic of the shuttle program.

Skilled professionals from diverse backgrounds who propelled America to continued leadership in space with the shuttle’s many successes. It is my great honor to welcome them home.

I salute them and all of the men and women who have flown shuttle missions since the very first launch on April 12, 1981.

– Charlie Bolden, NASA Administrator

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# Final Pathfinder Tank Weld Complete at MAF

The Boeing team at the Michoud Assembly Facility (MAF) in New Orleans has met a major milestone toward the future of space exploration with the completion of the final tank assembly weld on a Pathfinder Liquid Oxygen Tank. The pathfinder tank is a 5.5 meter diameter lightweight aluminum lithium design. State-of-the-art manufacturing and welding approaches were developed and demonstrated as part of the Upper Stage Production Contract (USPC).

This effort included significant advancement of MAF activation by completing key training and certifications for task leaders and weld operators; detailed approaches and processes for kitting, staging, shipping and receiving; and a significant focus on a healthy safety culture and process with the completion of job hazard analyses and lift plans. In addition, detailed facilities coordination with NASA



*Boeing Cryogenic Pathfinder Tank Final Weld completed at MAF.*

and Jacobs Technology ensures production readiness of cryogenic stages at MAF. This effort has been consistently performed ahead of schedule and within cost. MAF turntables were ready for use April 25 and the final tank assembly

weld was completed July 19, six weeks ahead of schedule.

The pathfinder tank weld and assembly is a major step toward production of the nation's next generation human-rated launch system cryogenic tanks.

## Letters from Leadership – Boating Safety

Recently a 12-year-old girl died in a boating collision in South Louisiana. Every summer I hear these sad stories, and in all accidents there are many mitigating factors such as no life vests, alcohol use and operating a boat too fast. But there is one factor you don't hear about too often. According to U.S. Coast Guard statistics, in over 75 percent of accidents, the operator of the vessel had no formal boating education.

When people drive their car they understand there are rules everyone must abide by or there would be chaos. Unfortunately, most boaters don't understand the same theory applies on the water. Some of the rules are similar and involve common sense – such as stay on the right side of a channel and in a crossing situation the vessel to starboard has the right of way. There is an unwritten rule called the "Tonnage Rule," which means if it is bigger than you stay out of its way.

One common remark I hear is "rules of the road, that's just for big ships." Those who say this are wrong. The Navigation Rules, International – Inland Regulations for Prevention of Collisions at Sea (COLREGS), which are regulated and enforced by the U.S. Coast Guard under the Department of Transportation, apply to ALL VESSELS. There are 38 rules and numerous addendums, these rules are in-depth and sometimes very complicated to understand. I highly recommend that every boater take some type of boating course that teaches these rules.

One book I recommend is "Chapman Piloting & Seamanship." This book is on its 66th edition so its been around a long time, is loaded with a wealth of boating information and should be required reading for everyone who owns a boat. Boating safety starts with you so be aware of your surroundings, operate your boat safely and be courteous.

*– Capt. Terry Fitzgerald, MAF Harbor Master*

# Final Landing

Continued from pg 1

The shuttle program brought our nation many firsts. Many proud moments, some of which I was privileged to experience myself as a shuttle commander. I was proud to be part of the shuttle program and will carry those experiences with me for the rest of my life.

As we move forward, we stand on the shoulders of these astronauts and the thousands of people who supported them on the ground - as well as those who cheered their triumphs and mourned their tragedies.

This final shuttle flight marks the end of an era, but today, we recommit ourselves to continuing human spaceflight and taking the necessary-and difficult-steps to ensure America's leadership in human spaceflight for years to come.

I want to send American astronauts where we've never been before by focusing our resources on exploration and innovation, while leveraging private sector support to take Americans to the International Space Station in low Earth orbit.

With the bold path President Obama and Congress have set us on, we will continue the grand tradition of exploration.

Children who dream of being astronauts today may not fly on the space shuttle . . . but, one day, they may walk on Mars. The future belongs to us. And just like those who came before us, we have an obligation to set an ambitious course and take an inspired nation along for the journey.

I'm ready to get on with the next big challenge. The future is bright for human spaceflight and for NASA. American ingenuity is alive and well. And it will fire up our economy and help us win the future, but only if we dream big and imagine endless possibilities. That future begins today.

# Michoud Workers Recognized

Several Michoud Assembly Facility (MAF) employees were recently recognized at an awards ceremony at NASA's Marshall Space Flight Center (MSFC) July 28.

NASA awarded Geocent President Bobby Savoie its highest civilian honor, the Distinguished Public Service Medal, for outstanding leadership and support, noting that Savoie was directly responsible for securing an investment of over \$60 million in state-of-the-art manufacturing tooling for MAF.

Joe Costa, Michoud director of Production Support and Integration for Jacobs Technology, accepted an award on the behalf of the team recognized for achieving AS9100 certification at MAF in 2010. The AS9100 team was recognized for outstanding display of teamwork, dedication and commitment to MAF's future in securing AS9100 certification within 15 months of contract start.

MAF Chief Operating Officer Robert Champion was cited for exemplary management of the MAF Transition while overseeing the successful delivery of all remaining space shuttle external tanks.

Michoud engineer Don Pollitz was awarded the Marshall Center Director's Commendation Honor Award for exemplary dedication, coordination and execution of the design and construction for the Upper Stage New High Bay Manufacturing Building at MAF.

Lastly, MAF engineer Keith Savoy accepted a Marshall Group Achievement Honor Award on behalf of the MAF Environmental Management Compliance Team for extraordinary performance in ensuring environmental compliance with the NASA Environmental Management System at Michoud.

# Michoud Delivers Sled

*Babcock and Wilcox (B&W) and Jacobs Technology delivered their first joint fabricated assembly in support of the Orion Multi-Purpose Crew Vehicle July 6 to NASA's Johnson Space Center (JSC). The Mid-Air Delivery System "MDS" Sled Project was crafted at the Michoud Assembly Facility (MAF) in support of the NASA Capsule Parachute Assembly System "CPAS" program. The CPAS Structure or "Sled" will be used to test the parachutes for the Orion Multi-Purpose Crew Vehicle. "The CPAS Project marks a significant step toward establishing the refit MAF machine shop as a multifaceted machining, weld fabrication and assembly shop," said B&W's Dusty Irwin. Pictured from left to right are Cheryl Redmon and Ben Weisel from MAF, Terry Hagen and Dave Young from JSC, MAF Deputy Chief Operating Officer (COO) Malcolm Wood, B&W's Dusty Irwin, and Robert Champion, MAF COO.*



# STS-134 Astronauts Visit MAF, Students



STS-134 Mission Specialists Greg Chamitoff and Mike Fincke visited Michoud Assembly Facility July 19 to thank workers for their part in the successful STS-134 mission which included ET-122. The astronauts also took time to sit down with two 11-year-old Copper Mill Elementary students. Fifth graders Alexis Albert and Leanne Sorrel were part of Michoud Education Fellows-3 teacher Circe Bridges' team whose science experiment was chosen to fly on Space Shuttle Endeavor's final flight. The students' experiment was titled "How does microgravity affect the development of murine myoblasts?" The other fifth-grade team members, who were not able to attend the event, were Grace Dry, Madison Russell, Tyler Jackson and Jake O'Brien. Pictured left to right: Greg Chamitoff, Leanne Sorrel, Alexis Albert, and Mike Fincke.

## MEF-4 Teachers Wrap Up Summer at MAF

Three Michoud Education Fellows (MEF) visited Michoud and Stennis Space Center July 18 - 22. After a week of tours and briefs with Michoud personnel in June, the teachers selected three employees to interview about their experiences working for NASA and the education paths that led to their careers.

Tim Board and Chloe Peters from the Metrology Lab and Brian Westmeyer from the Test Lab gave interviews, which will be edited into a five-minute video summing up the summer visits to MAF.

The fellows also visited Stennis for two days in July as part of a professional development workshop for teachers. The teachers were taught science, technology, engineering and math enriched, NASA themed activities that they can implement in their curriculums to spark interest in their students and enrich their lesson plans.

The fellows will meet several times in the coming months at Louisiana State University to discuss their work in the classroom and will come together in May to brief NASA on their findings.



From left to right MEF-4 teachers Kristie Milligan, Bianca Deliberto, and John Thacker.

National Aeronautics and Space Administration

**Michoud Assembly Facility**  
13800 Old Gentilly Rd.  
New Orleans, LA 70129  
<http://maf.msfc.nasa.gov>

[www.nasa.gov](http://www.nasa.gov)

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MAF COO: Robert Champion

Editors: John Filostrat and Angela Storey

Layout/Design: Shannon Jurado

Photographers: Steven Seipel, Eric Bordelon,  
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