



# michoud messenger

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## SLS Facility Modifications March Forward

Michoud Assembly Facility modifications continue to make progress in support of requirements for NASA's Space Launch System, or SLS. Multiple projects are scheduled through 2014. Major facility modification and construction projects are scheduled in Buildings 103, 110, 114, 115, 131 and 451.

In Building 103, work to modify the Robotic Weld Tool 3 is steadily progressing. Scheduled for completion by May, the tool will be used to make dome components for SLS, and will be known as the Enhanced Robotic Weld Tool. Meanwhile, in the "grey box" area, substantial progress has been made on the segmented ring tool installation. Over the course of a week, what started out as an empty floor has grown into a circle of steel monuments and control boxes dedicated to fabricating L and Y rings for the SLS rocket. These rings are used to make barrel-to-barrel and dome-to-barrel connections within the SLS rocket's structure. The tooling installation work should be wrapped up in March with test and checkout procedures to follow immediately.

In Building 115, a high-bay manufacturing build-

ing originally intended for use on the Constellation Program, weld tooling is being installed for making the barrel components for SLS. Known as the Vertical

Weld Center, the friction-stir-weld tool will stand about three stories tall once fully assembled. The work is scheduled for completion in June.

In Building 110, the demolition work on Cells B and C has wrapped up with an excellent safety record. With the last section of concrete removed on Jan. 21, site preparations are being made for the installation of the Vertical Assembly Center. The VAC is where domes, rings and barrels will be joined together to complete the tanks or dry structure assemblies. The tool also will perform nondestructive evaluation on the completed welds. The work is scheduled for completion in December.

Building 131 will undergo major modifications. Scheduled to begin in February, the roofline will be extended north to accommodate the SLS's large size. This requires breaking up the tarmac in front of the building and adding to



*In Building 110, Cells B and C have been completely removed. The space is being prepared for the installation of the Vertical Assembly Center.*

# World's Most Powerful Engine Blazes Path for Space Launch System Advanced Propulsion

To help develop the nation's future heavy lift rocket, NASA resurrected the world's most powerful rocket engine ever flown -- the mighty F-1 that powered the Saturn V rocket-- and test fired it's gas generator Jan 24 at the Marshall Space Flight Center in Huntsville, Ala.

NASA engineers ran the gas generator at the Marshall Center's Test Stand 116. The test is part of a series that will push the gas generator to limits beyond prior Apollo-era tests. Modern instruments on the test stand measured performance and combustion properties to allow engineers a starting point for creating a new, more affordable, advanced propulsion system.

"As SLS research activities progress, these young NASA engineers will continue work with our industry partners to test and evaluate the benefits of using a powerful propulsion system fueled by liquid oxygen and rocket grade kerosene, a propellant we haven't tested with in some time," said Tom Williams, Director of the Propulsion Systems Department in Marshall Engineering Directorate.

The gas generator tested at Marshall today is a key F-1 rocket component that burns liquid oxygen and kerosene and is the part of the engine responsible for supplying power to drive the giant turbopump. The gas generator is often one of the first pieces designed on a new engine because it is a key part for

determining the engine's size, which is a factor in the engine's power and ability to lift heavy payloads and send them to space.

NASA's Space Launch System will provide an entirely new capability for human exploration beyond low Earth orbit. The initial 77-ton (70-metric-ton) SLS configuration will use two 5-segment solid rocket boosters similar to the boosters that helped power the space shuttle to orbit. The evolved 143-ton (130-metric-ton) SLS vehicle will require an advanced booster with more thrust than any existing U.S. liquid- or solid-fueled boosters. Last year, NASA awarded three contracts aimed at improving the affordability, reliability and performance of the rocket's advanced booster, including one focused on the F-1 engine.



*The gas generator from an F-1 engine is test-fired at the Marshall Space Flight Center in Huntsville, Ala., on Jan. 24, 2013. Data from the 30 second test will be used in the development of advanced boosters for NASA's Space Launch System, which is managed at the Marshall Center.*

## Boeing Executive Visits MAF



*Malcolm Wood, NASA deputy chief operating officer for the Michoud Assembly Facility, updates Boeing Defense, Space & Security president Dennis Muilenburg during the executive's Jan. 11 visit to the facility.*

## Skylab's 40th Anniversary



*The Marshall Exchange hosted an event Jan. 30 at both Michoud and the Marshall Space Flight Center to celebrate the 40th anniversary of Skylab, the United States' first space station. A live video feed connected the two events and participants were able to hear personal accounts from astronauts who flew on the mission.*

# Letters from Leadership

Here at Michoud, we are always looking for ways to improve our facility. Continuous improvement and efficiency gains are part of our DNA as a multi-tenant facility, with expertise in the manufacturing of large-scale aerospace products. At Michoud, we currently enjoy a number of services that make our jobs easier. From grabbing lunch at Café 351 to tax-free shopping at the Coast Guard Exchange or working out in the 320 Fitness Center, these services help build the Michoud community and streamline our work efforts.

With continuous improvement in mind, I'd like to ask each employee at Michoud to take five minutes, follow the link below and fill out a quick survey that will help us improve and add to the services we provide on site:

<http://www.surveymonkey.com/s/P2WVDDN>

Your opinion counts! We ask that each employee only take the survey once. Survey results will remain completely confidential and cannot be linked to an individual respondent. Once the survey data is gathered and summarized, we will use the results to guide our facility development efforts.

Another tenet of continuous improvement is recognizing the things we do well and appreciating the people that work at Michoud -- our greatest assets, who are responsible for our achievements.

In December, I tasked a team to create an award that can be distributed facility-wide, to recognize employees who go above and beyond in their service to the Michoud Assembly Facility. The new "Lagniappe Award" is a way for NASA management to recognize an employee for putting in that "little something extra" as they perform their duties. The award can be given to any employee at Michoud – even across company lines. The award is a way for our Michoud community to recognize individuals who are performing above the call of duty.

Stay safe and continue looking out for each other!

- Roy Malone,  
Director of Michoud Assembly Facility

## Beyond Zero Presidential Gold Coin Program

Mike Dawson, General Manager of the MSFOC Contract, would like to thank the following individuals for their contributions toward creating a "Culture of Caring" at Michoud. MSFOC employees James Cousin and Paul Herrin were selected as a "Gold Jacket" winner and runner-up, respectively. Both are now eligible for the NASA Caring in Action program and the semiannual drawing of \$500, set to take place in March.

Beyond Zero Presidential Gold Coin Recipients for January were:

Cliff Jiles  
Blaise Guzzardo  
Travis Armstrong  
Dameon Bickham  
Ronnie Schouest  
Damien Smith  
Andy Booth  
Tammy Harrington  
Wallace Goodman  
Mike Newbold  
Corey Armont

Manual Johnson  
Lawrence Stallings  
Tom Soden  
Ray Irby



## SLS Modifications

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the existing foundation.

Building 451 will receive a modification similar to building 131, with the roofline and foundation being extended to cover the liquid hydrogen tank. The building will continue to be used for proof-testing SLS components. The "beer can," a barrel-shaped structure for holding the external tank in place during testing, already has been removed from the test tool in preparation for SLS modifications.

### Be prepared as you approach Michoud's Gates

Michoud Protective Services would like to remind employees to have their badges ready when they approach the entrance gates. Every employee and visitor is expected to take his or her badge out of its plastic holder and hand it to the officer for examination. Once cleared for entrance, please proceed through the gates with caution.

# Science Fair Fun!



MSFOC employee Steven Seipel, pictured on left with other volunteers and staff at Einstein Elementary, helped judge the school's science fair Jan. 24. The student projects covered a wide range of scientific disciplines. Projects were submitted from students in the 6th, 7th and 8th grades.

# 1st Robotics Team Combustion



HR manager Ron Kent, on behalf of Jacobs Technology, presented a check to Northshore High School's FIRST Robotics Team 1912 – Team Combustion, located in Slidell, La. The team currently is preparing its robot to compete in the Bayou Regional Tournament set for March 21-23.

# Get Fit for the New Year!

Michoud would like to encourage all employees to take advantage of the fitness center in Building 320. In order to gain card-reader access, register your badge with the Michoud Medical Clinic in Bldg. 320. Remember – equipment safety is important. If a piece of fitness center equipment begins to malfunction while you are using it, please notify the Michoud Help Desk by calling 7-HELP and request that the machine is taken out of service for repair.



# JOB1 Tour



Recently, students participating in the City of New Orleans JOB1 Program toured Michoud, pausing at ET-94 for a quick photo. JOB1 is dedicated to responding to the labor market needs of high-demand, high-growth industries by preparing unemployed and underemployed citizens to move into the economic mainstream through family-supporting jobs and careers.

National Aeronautics and Space Administration

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