

Mission Success Bulletin



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<http://www.lockheedmartin.com/michoud/>

Michoud embraces open communications *Execution is key to superior work environment*



Lemuel Chissell, an electrician in Facilities & Environmental Operations, logs on LMPeople in one of the newly-installed Employee Information Centers.

When historically high-performing employees at Michoud Operations executed several incorrect procedures and experienced process escapes serious enough to threaten the External Tank Project, the company recognized the need for major changes to restore an atmosphere of excellence.

Enter JMW Consultants who specialize in assisting organizations not performing to their ability. JMW conducted a cultural assessment focusing on the expired certification concerns. Lack of man-

agement communication was a major issue.

Employees felt the work environment impeded change and progress; leaders weren't engaging in two-way communication; and the workforce felt leadership didn't articulate a vision or future for Michoud.

To demonstrate Michoud's commitment to an improved work environment and that leadership valued employees' input, management formed a process analysis team with employees and developed a streamlined, more efficient certification system.

Acknowledging their responsibility for a cumbersome procedure, the organization rescinded most disciplinary action.

Pat Powell, director of Business Transformation & Best Practices, acknowledged the JMW findings were similar to results from recent corporate-wide surveys and has initiated efforts to address these concerns site-wide.

To improve communications, Vice President & General Manager Marshall Byrd has conducted 19 Town Hall meetings reaching over 1,600 employees, ten breakfast meetings with 160 individuals, six general assemblies and extensive factory visits.

A direct outcome from the Town Hall meetings is the implementation of the Employee Information Centers. In August, hourly employees expressed concern over not having access to computers in a private setting to access e-mail and personal information on LMPeople.

Byrd asked Powell to seek a solution to the issue. By mid-November, a multi-directorate group of employees developed and executed a plan, making six computer workstations available for

workers across the facility.

Although improved communication starts at the top, Powell believes that all levels of supervision must be engaged with their employees in order to succeed. "My challenge to the rest of supervision and management is to emulate what Marshall Byrd is doing."

Powell also cited Ron Wetmore's series of Return to Flight meetings to keep employees updated on

Continued on Page 7

ET-120 Rollout

(Special Section on
Page 3)



Substantiated Ethics cases = Action Discipline taken in 92 cases during 2004

In recent Ethics Awareness focus groups and in the latest Ethics Survey, employees voiced a concern relative to feedback on general ethical violations.

In response to the employee concern, Michoud Operations has released Disciplinary Action metrics (see charts) that detail the results taken from cases that involved substantiated misconduct and other ethical issues in 2004. Most of these cases involved violations of company policy and procedures, rules and safety regu-

lations and the Code of Ethics and Business Conduct.

“Michoud issued 92 disciplinary actions last year for over 130 reported cases of misconduct or unethical issues,” said Ethics Officer & ISO 9001 Director **Feltus Kennedy**.

The majority of the cases fell under the category, “Employee/Management Misconduct” (53.3 percent), and included disciplinary actions taken for attendance, detrimental conduct, falsifying documentation, being under the influence of alco-

hol or other drugs, and the like. The next largest category, “Quality & Manufacturing Issues” (26.1 percent), dealt with negligent workmanship and stamp warranty violations.

“This past year Michoud Operations has emphasized the importance of stamp warranty and certification to perform tasks on flight hardware and processes,” Kennedy explained.

“Michoud has also focused on workplace harassment, improper computer usage and other misuses of customer and Lockheed Martin assets.”

The actions taken from the 92 disciplinary cases resulted in 11 terminations, 24 suspensions, 48 written reprimands and nine oral reprimands.

Periodically, the Michoud Ethics Office and Human Resources will report in the *Mission Success Bulletin* on the issues that employees raise and on the investigation results that evolve from these cases. “In doing this, individual confidentiality and identity will be respected,” Kennedy said.

“We hope these reports will communicate to employees that actions are indeed taken when substantiated misconduct is reported to management, HR, Legal or the Ethics Office.”

Employees are encouraged to raise issues of concern before a condition or situation becomes more serious for the employee or the company, Kennedy said. ■

Javery receives new Stennis assignment

Mike Javery, vice president of Operations, has been temporarily reassigned to a new position as vice president of Lockheed Martin’s Mississippi Space and Technology Center (MSTC) at Stennis Space Center.



Javery

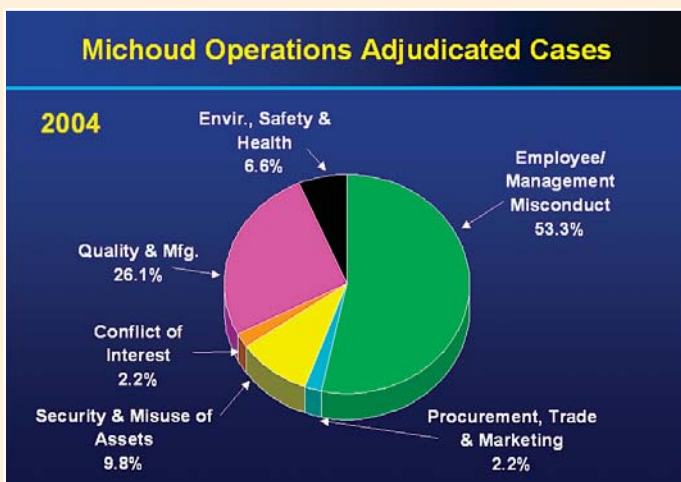
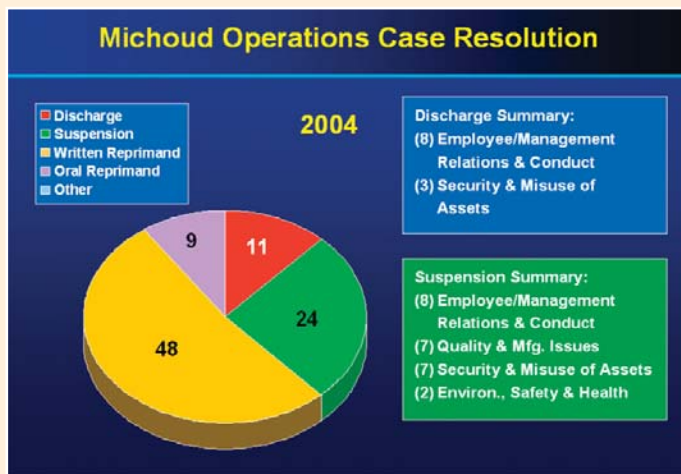
Vice President & General Manager **Marshall Byrd** made the announcement on January 7.

“With this week’s delivery of ET-120 to the Kennedy Space Center and our continued progress on ET-121...we are in a position to temporarily assist Lockheed Martin Space Systems on other priority programs.”

At Stennis, Javery will support production activities at MSTC in meeting several critical milestones and spacecraft delivery dates for Lockheed Martin customers. Javery will assist MSTC on cost, schedule and customer requirements in the areas of satellite propulsion subsystem integration, thermal blanket, heat shield production, tube product support and precision cleaning. He will also work on strategic alignment in developing long-range goals and actions at MSTC.

In the interim, Byrd will assume Javery’s responsibilities at Michoud as vice president of Operations. After Michoud delivers ET-121 in the first week of March, **Hal Simoneaux**, currently Return to Flight manufacturing operations lead, will take over as acting director of Production Operations.

Javery, an electrical engineer, joined Lockheed Martin in 1977. ■





6:19 a.m. December 31, 2004 – ET-120 rolls out

The first Return to Flight tank emerges from Building 420 at first light. "The last 60 days when we finalized the designs and implemented the work – the folks were working around the clock. It's just been impressive – a great team effort." -- *Ron Wetmore, RTF manager*

ET-120 – America's first step back to space

Finally, after 18 months of redesign, test, and retrofit activities, ET-120 rolled out of Building 420 in the early morning darkness on New Year's Eve to the applause of approximately 150 employees there to mark the occasion – completion of the first Return to Flight tank.

After a one-hour roll to the barge and a five-day trip to Kennedy Space Center (KSC), the tank is now undergoing launch processing activities in the Vehicle Assembly Building, and recognition is pouring in from all fronts on the effort made by the External Tank team.

Bill Readdy, NASA Associate Administrator, Space Operations Mission Directorate, flew to New Orleans to see the New Year's Eve delivery in person. In an e-mail after the event, Readdy wrote: "Congrats to your entire team. It's very impressive that you all delivered a pristine ET – on time, and with no open paper. Very much appreciate your collective attention to and diligence on this critical flight hardware."

The quality of the tank was not lost on **Bill Parsons**, Space Shuttle program manager. Upon receipt of ET-120 at KSC, Parsons assured all that "this will be the safest tank we've ever flown, no doubt about it."

The crew that will fly ET-120 sent their thanks and best wishes as well. "This is our opportunity to thank everyone who worked on External Tank-120," said **Eileen Collins**, com-

mander of the STS-114 mission. "Our great thanks go out to all the folks who did that work.

"It's time for us to go fly."

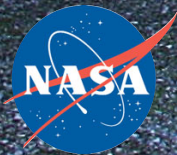
What's next for ET-120? A second on-site Design Certification Review (DCR) focusing on the tank's Thermal Protection System and Developmental Flight Instrumentation is slated January 24-February 3. Additional DCR activities are scheduled into March.

At KSC, ET-120 is scheduled for Solid Rocket Booster mate in February and Orbiter mate in March. After that, Space Shuttle *Discovery* will roll to the pad on March 16 where a tanking test will be performed on March 30. NASA says a May-June launch is "very much achievable."

The delivery of ET-120 is the first step in the future success of Michoud Operations, said **Marshall Byrd**, general manager & vice president. "Last month's delivery is part of the foundation on which we will build our future. But we must also meet our commitments to have ET-121 and ET-119 ready on schedule and close out our DCR paperwork in timely fashion.

"Over the next few months, we have several more opportunities to demonstrate our capabilities and commitment to NASA," Byrd noted. "Our continued outstanding performance will go a long way in assuring our future success." ■

ET-120 – The First Step to a Safe Return to Flight



December 31, 2004



6:35 a.m. A beautiful morning for a rollout
As dawn breaks over Michoud, ET-120 begins its 60-minute trip to the barge.



7:15 a.m. On the lead
Astronaut Tony Antonelli, Deputy Return to Flight Manager Wanda Sigur and RTF Manager Ron Wetmore escort ET-120 as it nears Port Michoud.

“This was the most gratifying moment I have experienced in years. Just to feel the team effort, the team spirit. Every employee knew what they had done. Every employee felt the contributions they had made to making this tank as perfect as it could be.”

– Sandy Coleman, NASA ET Program Manager



7:20 a.m. Standing by
The *Liberty Star*, one of two Solid Rocket Booster retrieval ships, is ready to tow ET-120 to Kennedy Space Center. The ship, which arrived at Port Michoud on December 22, has a 10-man crew.



7:30 a.m. ET-120 eases onto barge
It may look roomy, but ET-120 only has one foot to spare at the aft end when rolling onto *Pegasus*. The barge arrived with its own dedicated crew, apart from the *Liberty Star*.



ET-120 arrives at KSC on January 5
After a 960-mile trip, the Return to Flight tank rolls toward the Vehicle Assembly Building, where hurricane damage is still apparent. Inside the VAB, the tank will be lifted vertically into a checkout cell to undergo mechanical, electrical and Thermal Protection Systems inspections.

PMES to revolutionize factory floor work

It's been over three years in the making, but now Michoud Operations is poised to implement the Paperless Manufacturing Execution System (PMES).

A Production Readiness Review with NASA two months ago certified PMES as factory-ready, but NASA and Lockheed Martin jointly agreed to delay deployment to the floor until the first two Return to Flight tanks had been shipped.

The cutover weekend and implementation is now planned for April – when PMES will be installed and three legacy computer systems will be turned off, moving thousands of data records and work documents to PMES.

“When the system is implemented, we will accomplish what we set out to do several years ago,” says **Jeff Irby**, NASA PMES project manager, “that is, to replace a large percentage of the External Tank Build Paper such as paper-based manufacturing instructions and Non-Conformance Documents (NCD) with electronic media.”

“PMES will reduce the amount of paperwork generated for ET production and tooling,” says **Graf Weller**, Lockheed Martin PMES project manager. “To support increased computer transactions, we installed additional computer hardware and upgraded the Local Area Network.”

The new system will change the way employees

verify skill certifications and qualifications. Previously, employees recorded their “certs” and qualifications manually, followed by Quality Control verification.

Now PMES will automatically validate certs and qualifications when employees present their badges before a badge reader at many of the computers on the factory floor. The system will only permit employees to buy-off (stamp) an operation where they own all the necessary certs and qualifications.

Irby believes that an electronic format inherently provides enhanced process control, more efficient management and improved “trace-ability.”

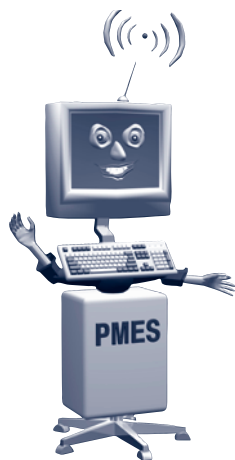
Weller agrees, “It’s a validation that software supports the way we do business.”

A good example is the NCD process. “Today, we write NCDs on paper,” Weller says. “Under PMES we’ll initiate, route and status them electronically without having to search for the NCD, which should provide more visibility and be more efficient.”

Weller acknowledges that PMES will be a challenge at first but says that employees will be engaged and trained to support the rollout of the system.

“Bottom-line – PMES allows the manufacturing processes to take advantage of the benefits afforded by the electronic age,” says Irby.

Prior to the April cutover, a factory-wide exercise is planned to keep employees engaged using the software. ■



Three receive Silver Snoopies

Astronauts Tony Antonelli (left) and John Young presented Snoopy awards for outstanding performance to Linda Savage, Program Management & Technical Operations (PM&TO); Earl Kessler (center), Facilities & Environmental Ops; and Lloyd Brinker, PM&TO. The astronauts cited Savage's safety awareness with fellow employees; Kessler's support to the STS-107 investigation and RTF projects; and Brinker's safety record with air and plant gas analysis and handling hazardous chemicals. ■

Open Communications

Continued from Page 1

activities as an example of how improved communication can be accomplished.

To give supervisors the training skills to succeed, JMW is providing training

courses for all levels of management to develop new communication and collaboration skills. Executive Leadership has completed two of six sessions and senior managers have completed one of four, with the balance slated for completion by the end of the summer.

While these sessions are targeted specifically for leadership, the enterprise

level Diversity Program currently under way reinforces the same principles that helped develop the new certification process. All employees can contribute to foster an atmosphere of superior performance that is essential for Returning to Flight.

“If we execute our work today and position ourselves to support the next shuttle missions safely, I believe we have a tremendous future on this facility.”

*– Marshall Byrd,
Vice President &
General Manager*

Success on the ET Project is a requirement for future success, asserts Byrd. “If we execute our work today and position ourselves to support the next shuttle missions safely, I believe we have a tremendous future on this facility. To accomplish this we must communicate openly throughout the

organization. We need to work as a team and do what is right for NASA, for our astronauts and for the nation.” ■

Milestones

Employees celebrating anniversaries with Lockheed Martin in December 2004, January and February 2005

30 years

Evelyn Banks
Noel Debose
Erick Green
James Massey

Bennie Ferrell
Joseph Gagliano
Nancy Harris
Robert Held
Roy Higginbotham
Billie Hill

Wesley McMellon
Gordon Meadors
Bennie Mills
Michael Neff
Ronald Pena
Virgil Phillips
Russell Picone
Douglas Powell
Gary Priest
Harold Sears
Terry Sherman
Troy Smith
Eugene Sweet
John Tonglet

Glenwood Dobbins
Curtiss Dossett
Harold Drummond
Charles Hoffman
Jeffrey Hudson
Anthony Pagano
Brian Piekarski
Dennis Puissegur
Leroy Ricard
Richard Smith
Michael Steiner
Cheryl Sullivan

Robert Delpidio
Michael Dudley
Eric Enright
Wesley Geiman
Ngoc Nguyen
Michael Rabito
Karla Ruppenicker
Rick Spring
Nelly Williams

25 years

Cheryl Alexander
Elias Atilano
Judith Bilich
Holly Brodsky
Michael Campbell
David Cardon
Glinda Caston
Joel Copeland
Glenn Cotty
Gilbert Etienne
Richard Fagot

Daniel Holcomb
Harvey Jackson
Lynda Johnston
Robert Keener
Donald Kerlec
Roy Kridler
Robert Larche
Steven Lecesne
Charmaine Lemaire
Spencer Luebe
Shawn Maheia
Keith McClaine
Steven McCutcheon

20 years

Donald Baxter
Cheryl Cannon
Lanson Chien

15 years

Carolyn Baringer
Craig Coleman
Richard Crawford
Iris Davis
Perry Degelos

10 years

Christopher Bourgeois
Carolyn Brookter
Gerald Fabre
Roland Galatas
Steven Garner
Joseph Hillmer
Jennifer Takeshita
Michelle Worden



CajunBot roams Michoud

Built by professors and students at the University of Louisiana - Lafayette, "CajunBot" showed off some of its vehicular moves this past month at Michoud Operations. Here, ULL student Joshua Bridevaux monitors the vehicle's movements. Partially financed by Lockheed Martin and capable of navigating on its own, the 1,200-pound all-terrain CajunBot sports six wheels and a 25-hp engine that can accelerate to 30 mph. ULL engineers built CajunBot to compete in a Department of Defense challenge to see if robots can travel autonomously in mountainous and desert conditions.

Emergency Information

To find out the work status at Michoud, call **257-1MAF** or **1-800-611-3116**, check ETV, listen to **WWL-870** radio or **WWL-TV**, or go to www.mafstatus.com

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