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



Last week STS-121 crew members dropped in to see their tank, ET-119. From left are pilot Mark Kelly; mission specialists Mike Fossum, Lisa Nowak, Piers Sellers, Stephanie Wilson; and Cdr. Steve Lindsey.

Michoud delivers ET-119 early

Tank will be first to fly without PAL ramps

When NASA made the decision in December to fly the External Tank without Protuberance Airloads (PAL) ramps, some wondered if that move would delay the shuttle flight schedule. But the Michoud Operations team worked hard to close the gap and to support program plans by delivering ET-119 to NASA on February 24 – one

week ahead of schedule.

“I give all of the credit to our workforce and the joint Lockheed Martin/NASA team for being able to deliver the tank early,” explained **Wanda Sigur**, External Tank program manager. “They took the PAL ramp decision in stride, began a design and test program for the tank, removed the ramps, implemented our

redesigns and got ET-119 out the door, using their energy to drive out and resolve issues and to work contingency plans.”

Even though the PAL ramps have been removed, Sigur said that testing such as coupon through complex component tests, assessment of the underlying structural

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Survey results reflect varied, new challenges

Housing, transportation gains offset by family, financial concerns

Some 70 percent of the Michoud workforce responded to the February employee survey to evaluate the continuing individual effects of Hurricane Katrina on our lives and families. While the results clearly show that significant progress is being made, a number of challenges remain.

The 1,321 respondents reflected the diversity of the local workforce and included hourly, salaried and NES personnel, in every age group and career stage. As would be expected on a mature program such as the External Tank, 71 percent of the respondents had 10 or more years of service to Lockheed Martin.

Housing remains a major issue in the metropolitan New Orleans area where over 100,000 homes were heavily damaged or destroyed in the storm. Results of a 2005 post-Katrina survey of Michoud employees had indicated that 47 percent of all employees had lost their homes or the homes were unlivable.

The most recent data, how-

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ISO audit this month

British Standard Institution auditors will visit Michoud Operations the week of March 27 to conduct a continuing assessment for AS 9100 certification.

Auditors plan to work at Michoud for three days and spend the remainder of the week at Huntsville Technical Operations.

“The assessment that we had planned for the August-September 2005 timeframe was to begin on August 29,” explained **Feltus Kennedy**, ISO senior management representative and Ethics Officer.

“We all know what happened that day. So the audit obviously was postponed because of Katrina to be concurrent with the upcoming assessment in March.”

Michoud’s audit will cover the normal procurement process, the manufacturing process, control of non-conforming products, infrastructure such as environmental control requirements and maintenance, and certification and qualification processes, quality management policies and procedures. ■



Technicians make final changes to ET-119 before the tank departs for Kennedy Space Center.

ET-119

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hardware and Thermal Protection Systems will continue to determine if there’s any effect from PAL ramp removal.

PAL ramps were added to the ET in the early days of the shuttle program to address a possible concern with cross air flow under the cable trays. Since then, analytical technology has evolved, and preliminary analyses and tests led to the decision to remove the PAL ramps.

After removing the ramps, technicians sprayed foam around the ice frost ramp areas and added ablator where needed to restore the sections to an aerodynamic condition similar to other areas without PAL ramps.

Technicians also performed Non-Destructive Evaluation before and after foam removal to check underlying foam conditions.

Other ET-119 redesigns included sealing the wire harness installation at the bipod to prevent leak paths. And on

the Intertank, technicians vented additional areas of the tank and also modified instrumentation to gain the desired data from the next flight.

Before ET-119 can fly, test programs must be completed, Sigur said. Also, analyses and design, verification and certification reviews must be concluded in the next few months.

The next tank to ship to KSC after ET-119 will be ET-118, which Michoud is scheduled to finish May 30. ■

Honorees recognized in Florida

In February over 200 honorees participated in a Space Flight Awareness recognition event in Orlando. Those representing Michoud included front row from left: Bill Brandow, Larry Jackson, Tony Flot, Eric Leonard, Mike Tracey, Bobby Burge and Doug Vitrano. Back row: astronaut Dom Gorie, Bob Eagan, Phil Nameth, Craig Jenkins, James Dutton, Neil Duncan, Mark Pokrywka and John Trowbridge. ■



Marsh touts 2005 Space Systems success

Following several years of outstanding performance, Lockheed Martin Space Systems achieved even greater success in 2005.

In his "2005 Year End Review" presentation to Michoud Operations management, **Tom Marsh**, executive vice president, Space Systems Company, attributed the company's accomplishments to successful program execution, yielding impressive 95 percent Award Fees.

Key events in the successful year included the final Titan IV launch, three Atlas and four Proton launches, delivery of a retrofitted External Tank and a successful Return to Flight mission in July. The company also achieved critical milestones in the Space Based Infrared System (SBIRS) program and the first Theatre High Altitude Area Defense (THAAD) system launch.

Space Systems attained success across multiple areas. "We've had another exceptional year for new business, with 82 percent of our bids being won," Marsh explained. "This contributes to a three-year competitive win rate of 76 percent, placing us at the top of the corporation."

Important wins included the Extended Evolved Launch Vehicle Next Buy and Phase I of the Crew Exploration

Vehicle, portions of which are slated to be built at Michoud.

Financially, the company also exceeded its commitments in a strong market. "Orders are up, indicating that our program performance, technology investments and strategic teaming are delivering results," said Marsh.

He also reflected upon the resilient ride-out crew at Michoud – many of whom experienced great personal loss during Hurricane Katrina – but placed the preservation of facilities and flight hardware as a top priority over their own personal needs.

Looking ahead to 2006, Space Systems will continue efforts to develop employees in a variety of ways. Two-Way Communication initiatives will continue to be the focus of activities, along with the implementation of Full Spectrum Leadership, employee programs and the Diversity Maturity Model.

Most importantly, Marsh predicted a challenging Mission Success pace this year – 46 events in all.

"With one event per week, we need

to keep focused and continue the exceptional success rates we've enjoyed over the past few years in Space Systems." ■



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*- Tom Marsh
Executive Vice President*

Lockheed Martin prepares to bid on CEV

An important milestone in human space exploration is less than three weeks away. On March 20, Lockheed Martin will submit its Phase II proposal to design, develop and build the Crew Exploration Vehicle (CEV).

"We're in the process of putting in a bid for the CEV, which is a long-term large program where we'll do a fair amount of work here at Michoud," noted **Tom Marsh**, executive vice president, Space Systems Company, during a recent visit to Michoud.

NASA is scheduled to choose a CEV prime contractor in July – either the Lockheed Martin team or the competing Northrop Grumman-Boeing team. Both are currently working on Phase I contracts awarded last July for CEV systems requirements definition.

Michoud Operations recently delivered its part of the Phase II bid package to the Lockheed Martin team in Denver.

"We have a significant role in structures design and analysis, CEV final assembly, and Thermal Protection Systems element design and analysis," said **Jim Bray**, Michoud CEV project manager. Bray credited the efforts of the ten-member CEV proposal team for establishing the technical and programmatic baselines for Michoud's work scope in Phase II.

"CEV offers Michoud the opportunity to broaden our product offerings into human-rated spacecraft – building upon our human-rated launch vehicle design and manufacturing expertise and technologies," said **Dan Ferrari**, director, Business Development.

NASA hopes to fly the CEV as close as possible to 2010, when the Space Shuttle is scheduled to be retired. As a critical part of the nation's Vision for Space Exploration, the spacecraft will be designed to fly with six astronauts to the International Space Station and with four astronauts to the moon. ■



Editor's Note: The following are employee comments from the Katrina Survey.

"It has strained my immediate family relationship. My wife likes to feel secure. Since Katrina, she does not feel secure."

"The loss of all my material possessions except for my car and a few sets of clothes has been an unbelievable experience for me, but knowing that my job was still there, and that my company was standing behind me with financial and moral support helped ease the pain."

"I appreciate the money that was donated and the St. Vincent's option, but both are gone now."

"I was a very patient person before the storm. Traffic did not bother me. Now, many days I am stressed before I get to work and by the time I get home. I do not feel that I am getting to spend adequate quality time with my children and husband. I am ready for life to return to normal....of course, I am beginning to realize that 'Normal' may never be the same."

"Need continued support of management to allow flexibility in work hours to handle myriad of Katrina-related issues. Housing, childcare, etc."

Survey results

Continued from Page 1

ever, indicated that an encouraging 64 percent of all surveyed employees already had secured permanent housing, with an additional 15 percent in accommodations through the end of the year or beyond.

Smaller percentages of employees had arranged temporary accommodations for six months or less (13 percent), were living in trailers (4 percent), or in other housing (4 percent).

Other survey results indicate that these accommodations are in proximity to the Michoud Assembly Facility and/or reflect improvements in the transportation infrastructure.

Forty percent of respondents report that their post-Katrina commute time has not changed appreciably, while 50 percent indicate that their drive time has increased by up to an additional one hour. For an unfortunate one percent of the respondent population, their commute time has increased from two to four hours longer.

When looking at community factors that are negatively impacting employees' lives, items mentioned most frequently as a challenge or significant impact are overcrowded communities (68 percent), loss of expected amenities (58 percent) and damaged infrastructure (55 percent).

Employees' home life is certainly not immune to stress generated by the post-Katrina environment, with 54 percent

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"It is important that we help employees address the issues that have a significant impact on their work and home lives."

*- Pat Powell
Director of Business Transformation & Best Practices*

of respondents identifying personal finances as creating a challenge or significant impact, 34 percent mentioning the health of themselves or family members and 31 percent reporting on the separation from their extended family.

Almost 700 employees took the opportunity to include personal observations and suggestions.

While the largest group (23 percent) expressed their gratitude to NASA, Lockheed

Martin and their fellow employees for their ongoing encouragement and support, others identified additional needs in working with FEMA and the Small Business Administration (SBA), in working with elected officials and community leaders to accelerate recovery, improving work schedules and workplace communications, and managing financial concerns, among others.

Michoud Operations is exploring options to address these and other employee concerns, and many actions have already been taken.

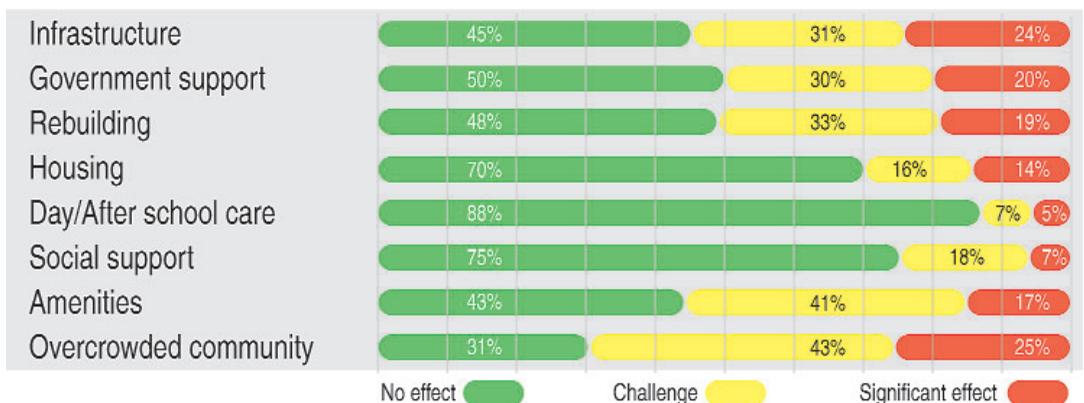
The company provided on-site access to FEMA and SBA representatives, legal assistance and tax briefings, and no-cost notary services to improve our employees' access to financial assistance that may be available through these agencies.

Quick links to relevant information ranging from school status to property taxes, business openings to voting sites are available on the maffamily website at www.lockheedmartin.com/maffamily

The Katrina Fund, made possible through the contributions of the Lockheed Martin Corporation and its employees, distributed over \$5 mil-

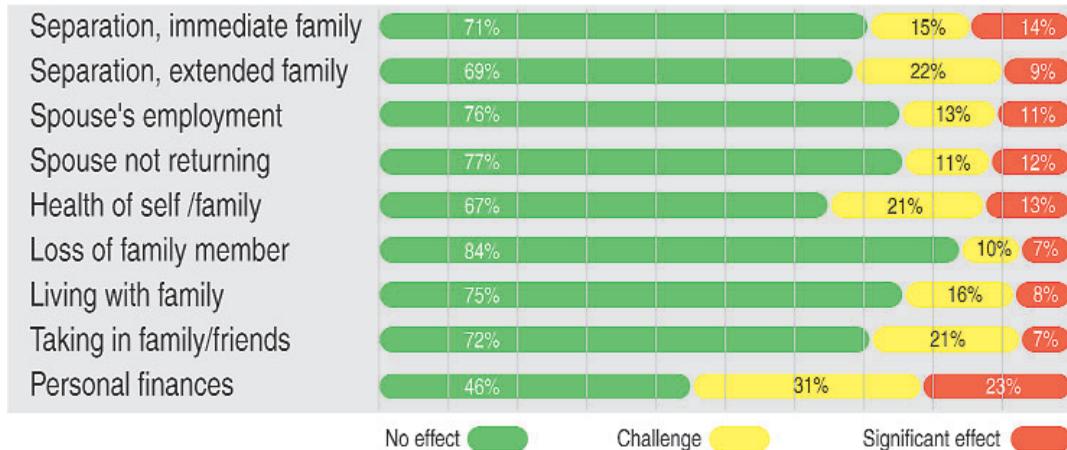
Community Factors

How will this community factor affect your ability to remain in the Gulf Coast region?



Family Environmental Factors

How will this family environmental factor affect your ability to remain in the region?



lion in local employee aid, with the largest amounts going to employees who had lost their homes.

Housing fairs and the House Busters' volunteer program (see story on Page 6) aided employees in finding accommodations and in taking the first step to returning to their own homes. To date, House Busters' employee volunteers have donated over 1,500 hours to gut more than 18 homes.

In the community, company representatives have been actively working with state and local elected officials and civic groups to develop workable plans to protect our property for the future and expedite recovery now.

Marshall Byrd, Michoud Operations vice president & general manger, has urged company management to increase the amount of face-to-face communications at every level and encourages the use of the existing flex-time policy that allows salaried and NES employees to develop their own work schedule built around the mandatory core hours of 8:30 a.m. to 3 p.m. on first shift.

Byrd has also requested an

updated market value survey of jobs in light of increased competition for local professional and technical employees. Employees can now check the Total Value of their

“Post-Katrina recovery is unlike any we have faced before, but I have complete faith that by working together, we will succeed – at work and in our homes and our communities.”

*- Marshall Byrd
Vice President & General Manager*

compensation package by visiting LMPeople.

The Employee Assistance Program is developing resources to assist employees and their family members in recognizing and coping with stress.

Employee-paid transportation services to and from Michoud are expected to improve, along with a significant reduction in cost.

Pat Powell, director of Business Transformation & Best Practices, will continue to evaluate survey results and develop plans for future

action.

“It is important that we help employees address the issues that have a significant impact on their work and home lives,” noted Powell.

“We can work the issues in our control, influence those that are not, and leverage our coping skills to see us through the rest. We must always move forward. Regret is a waste of energy – you can’t build on it.”

“We remain committed to supporting all our employees in every way we can,” added Byrd.

“Maintaining our highly-skilled workforce is a key to everything we do: to completing External Tank improvements; safely flying out the Space Shuttle program; and winning new business like the Crew Exploration Vehicle (see story on Page 3), Crew Launch Vehicle and Shuttle Derived Launch Vehicle.

“Michoud Operations has an incredible record of overcoming enormous challenges. Post-Katrina recovery is unlike any we have faced before, but I have complete faith that by working together, we will succeed – at work and in our homes and our communities.” ■

“Supervision, including myself, must not mistake post-Katrina impacts to an employee’s work output/concentration as a sign of an employee’s lack of ability or wanting to do a good job. It is just there will be times when their life outside of MAF may just be of greater importance.”

“The availability of affordable housing in the New Orleans area is a huge problem.”

“The viability of this area affects us all, even when our homes and families are safe. I can deal with the issues of no gas, few restaurants, crowded streets etc. but the cloud of long-term employment at this facility is for many the single most significant issue in determining if to stay or leave.”

“My answers would have been a lot different a month ago. I appreciate all the help, financial and otherwise, that LM and NASA have provided.”

“Personally I am having problems keeping up with personal responsibilities & errands since the hurricane. Store hours are shortened & the amount of time that you spend at work & traveling to and from work limit you to what you can or can’t do already.”

“The ability to participate in the HouseBusters program is good.”

House Busters a “smashing” success



On Friday, House Busters foreman Ken James (right) led Space Systems Executive Vice President Tom Marsh and Deputy Joanne Maguire through Terry Sherman’s flooded home.

The good work that House Busters is doing – in gutting employee homes that flooded during Hurricane Katrina – continues to spread around the company and to other volunteer groups.

On February 17, Space Systems Executive Vice President **Tom Marsh** visited Michoud and gave a positive “2005 Year End Review” talk.

This was Marsh’s second trip to New Orleans since the storm – he helicoptered into Michoud the Saturday after Katrina hit.

“It’s going to take a while before things get back to normal,” commented Marsh this past week.

“It’s a resilient bunch that continues moving the shuttle forward and getting their lives

put back together after the devastation of the Hurricane Katrina.”

During the day Marsh and Space Systems Deputy Joanne Maguire toured employee Terry Sherman’s home that House Busters planned to gut the next day.

Both were moved by the damage they saw in Sherman’s home and neigh-

“The Tulane students were fabulous. They really worked hard and had a purpose to help Calvin and Terry.”

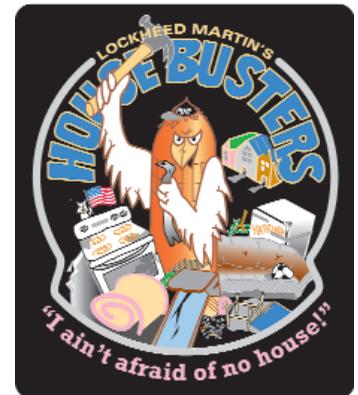
*- Gordon Dyer
House Busters Coordinator*

borhood close to the New London Canal and the University of New Orleans.

The following day a dozen Tulane University engineering students joined 11 Michoud volunteers to first gut **Calvin Madison’s** home of sheetrock,

walls, ceilings, insulation and bathroom fixtures. Then the group went to Sherman’s home and removed 90 percent of the furniture and personal contents.

“The Tulane students were fabulous,” observed House Busters coordinator **Gordon Dyer**. “They really worked



hard and had a purpose to help Calvin and Terry.”

Also, on the Friday before Mardi Gras a group of skilled Lockheed Martin Aeronautics employees from Meridian, Miss. drove down to hang sheetrock at **Faye Exnicious’s** home and **Charles and Blanche Holding’s** home in Slidell.

This is the second time the Aero group has assisted employees in rebuilding their homes.

“The Meridian group is helping our employees as they begin to reconstruct their homes, while our House Busters volunteers remain focused on gutting and stripping employee houses,” Dyer said.

So far, House Busters has gutted 19 employee homes and has approximately 20 more to strip. In addition, Meridian and Sunnyvale employees have worked on five employee homes during the holidays and on their off-Fridays. ■



On Saturday, Tulane students and Michoud employees surrounded Terry Sherman after removing most of the furniture from his home.

Crusaders in community recovery



Stefancik

Editor's Note: This is the first in a series of articles on Lockheed Martin employees who are making a difference in revitalizing our communities. If you know someone contributing to the recovery effort, please call Toni McCormick at 7-5211.

The employee: Steve Stefancik, manager, Information Technology Systems and chairman, St. Tammany Parish Council

The challenge: Addressing infrastructure issues resulting from the virtual overnight growth of the St. Tammany population as a result of damage from Hurricane Katrina in neighboring parishes.

Accomplishments to date: Working within the framework of the Louisiana Recovery Authority, St. Tammany Parish developed and recently submitted a plan to state government that determines how Community Development Block Grant money allocated to the parish will be spent.

Pulling from business, community and political leaders, the parish implemented a plan focusing on five subjects: infrastructure, housing, medical, business development and education.

With a 50 percent increase in population and a 45 percent increase in traffic, Stefancik's task force is focusing on roads, communications, sewage and water. Working with the state Department of Transportation & Development, the group identified 16 cost-effective near-term improvements.

Six recommendations are already complete, including re-striping roads from three to four lanes and adjusting traffic patterns for better flow. Improvements include adding lanes in both directions at Highway 59 and I-12 through the overpass, a new right-turn lane at Airport Road on the westbound turnoff, and an additional lane at Highway 21 heading north from I-12

westbound.

Other upgrades include re-setting traffic lights on Highway 11 at the Eden Isles exit, at Airport Road from Highway 190 through the I-12 overpass, at the Highway 21 and I-12 overpass, and on Highways 1077 and 1088.

More substantial projects are in the works such as new roads, fiber optics for improved communication and a full spectrum of housing requirements.

Stefancik points out that the parish negotiates with contrac-

tors at the beginning of each year for storm damage debris removal. When Katrina struck, everything was in place to begin immediate clean-up. To date, five million cubic yards

of debris have been removed from the parish, with another one million-plus cubic yards remaining.

The parish also helped retain over 50 local companies by relocating them in St. Tammany. Textron who builds the amphibious boats and Humvees for the military had prepared to move its corporate offices to another state, but St. Tammany worked to keep the company in Louisiana. As a result, Textron relocated its offices to Airport Road in Slidell.

Because of St. Tammany's pro-active approach, Stefancik believes the parish is farther ahead in recovery and re-development efforts than surrounding parishes.

Personal philosophy: "We aren't waiting for the Federal Government to provide us with money to rebuild. We are using money we have, and money that we've borrowed. We then submit the bills to FEMA and are now starting to get reimbursed.

"By showing we are good stewards and by using the money wisely, we will convince Congress to appropriate more money as we need it. We are all in this together. All the parishes must work in concert; what happens here can and does affect the entire state." ■

Making a Difference

Hutchinson appointed medical director

Lockheed Martin has named **Dr. Troy Hutchinson** the new director of Medical Services at Michoud. His responsibilities will include diagnosing and treating work-related illness and injury for Michoud's 2,000 employees.

In addition Dr. Hutchinson will also supervise the medical clinics in Sunnyvale and Denver.

Dr. Hutchinson succeeds Dr. Marleece Barber who resigned after Hurricane Katrina to take a similar med-

ical post in the oil and gas industry.

A native of New Orleans and a graduate of the University of New Orleans with a degree in Biology, Dr. Hutchinson received his Doctor of Medicine Degree from the Louisiana State University School of Medicine in 1994.

He completed his internship and residency through

participation in a highly prestigious primary care residency program with the Washington

Hospital outside Pittsburgh, Pa. where he also practiced occupational and emergency care medicine.

While in Pennsylvania, Hutchinson also was co-medical director at

the Washington County Correctional Facility.

Returning to Louisiana in

1997, Dr. Hutchinson served as attending physician at Lady of the Sea Medical Clinic and General Hospital in Galliano, La., as medical director at the Lafourche Parish Detention Center in Thibodaux, and on the Tulane University School of Medicine faculty, supervising third-year students in their Family & Community Medicine rotations.

In addition, he has served as medical director at the United States Coast Guard Station in Grand Isle, La. ■



Hutchinson



Connie Ramsey (right) talks with Rachel Encalarde about her quilt.

Guild donates 135 quilts

After what many Michoud employees have been through in terms of losing their homes, vehicles and belongings to Katrina, being selected to receive a quilt didn't seem like a big deal.

That is, until the quilts arrived from Florida. They were beautiful. One had to wonder how much time it took to sew and match the colors on each quilt.

"After we heard about so many Michoud employees losing their houses, we wanted to help our extended space family," explained **Connie Ramsey**, president of the Space Coast Quilters Guild in Titusville, Florida.

Of the 130 women in the guild, probably 50 or more worked consistently on the quilts every Wednesday since Katrina.

Gerald Craft who works in the tool crib called the quilts a total blessing. "It speaks volumes about the people who made these quilts." Seven feet of water settled in Craft's house.

The guild presented the quilts to employees whose homes suffered extensive damage from Hurricane Katrina. Space Flight Awareness drew the names from those employees whose homes fall under the Total Loss/Unlivable category.

"It lets you know that somebody is thinking of us – a nice gesture," said pump operator **Royal Holland**. "This was a real pep-upper for my spirits," said **Rachel Encalarde**. ■



Rebuilding plan for Louisiana on maffamily

Michoud Operations updates the maffamily website at www.lockheedmartin.com/maffamily for you and your family several times a week.

One important new addition to the website is the Louisiana Recovery Authority's strategy for rebuilding. The brief PowerPoint presentation addresses the challenges of recovery and rebuilding from Hurricanes Katrina and Rita.

Also, the recent Legal Briefings that took place at Michoud have also been posted on maffamily. And this edition of the *Mission Success Bulletin* is available on maffamily. ■

Milestones

Employees celebrating anniversaries with Lockheed Martin in March 2006

30 years	Brenda Miles	Thomas Leboeuf
Larry Decuir	Janice Pearl	Elaine Nita
Richard Hawkins	Donald Pittman	5 years
Darwin Hector	Gail Reese	Paul Cheramie
25 years	Theresa Rivera	Charles Coultas
Arnold Augustine	Edward Washington	Betty Williams
William Boni	20 years	
Gary Burnett	Dow Manlove	
Joseph Culligan	Mark Pokrywka	
Verna Freeman	15 years	

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