



Stennis selected for Space-Based Laser test facility

U.S. Senator Trent Lott (R-Miss.) announced in mid-January that Stennis Space Center was selected as the location of the Space-Based Laser (SBL) Performance Test Facility by the U.S. Department of Defense's Ballistic Missile Defense Organization (BMDO).

The SBL program is a series of technology development and demonstration initiatives being carried out by the U.S. Department of Defense. Its purpose is to demonstrate the technical feasibility of developing, building and deploying a space-based laser missile defense system.

"This is a huge announcement," Stennis Space Center Roy Estess said. "Many people have been working on this for a long time. We are excited about the positive impact it

The Space-Based Laser Performance Test Facility will be located at Stennis Space Center. The program is expected to eventually create 1,000 jobs and have a total economic benefit of \$100 million on surrounding communities over five years. The program is a joint venture among the U.S. Air Force, the Ballistic Missile Defense Organization, Lockheed Martin, TRW and Boeing.

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Global economic impact of Stennis Space Center tops \$615 million

Figures indicating Stennis Space Center's economic impact on surrounding communities for FY 2000 were released at a news conference hosted by Partners for Stennis at the space center Feb. 2.

The John C. Stennis Space Center had a direct global economic impact of \$615 million. The economic impact on local areas within a 50-mile radius totaled \$438 million. This figure was up from \$405 million the previous year.

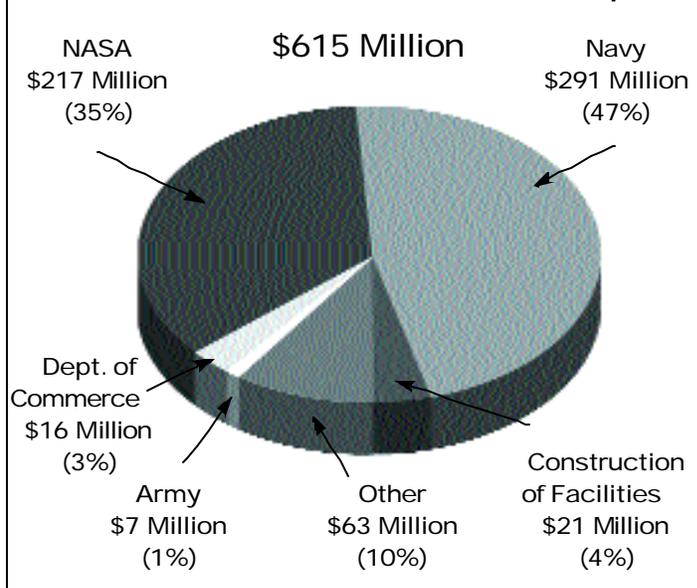
Partners Chairman Roy Keller of the Louisiana Business and Technology Center opened the news conference and introduced guest speakers, Roy Estess, director of Stennis Space Center, and Rear Adm. Thomas Q. Donaldson, V, commander of the Naval Meteorology and Oceanography Command at Stennis.

"NASA activities are going on vigorously," Estess said. "We are spending on the order of \$50 million this year on expansion and building new test facilities. Currently, all of our test facilities have customers. Forty percent of this work is commercial work being done in a government test facility.

"The rocket propulsion testing activities are very robust. Other activi-

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SSC Direct Global Economic Impact



Director's Dialogue

from Center Director
Roy Estess



Stennis "Story" Spreading

"Incredible technical capability," "your work force knows rocket facilities," "tremendous cooperative spirit," "unbelievable value," and "willingness to accommodate." These were phrases used by the U.S. Air Force and the Space-Based Laser (SBL) search team to describe Stennis Space Center when they visited us recently to announce and begin their long-term commitment to reside at Stennis.

Over the past four years, numerous personnel from Stennis have been involved in providing information to SBL officials. I want to recognize all of the individuals who behind the scenes have been hosting visits and conducting dialogues that have successfully landed this important new program.

The Stennis "story" is being told more often these days to a broader and more diverse customer base. Stennis is gaining recognition on the national and international scene as an efficient and economical place to conduct business. Credit goes to all the Stennis team who work efficiently and economically every day. Your motivation and commitment make the job of selling Stennis as a great place to do business much easier for those of us on the front line.

I am happy, as we all should be, when a new commitment is made to Stennis. I am particularly pleased with this recent announcement for several reasons. This U.S. Air Force-sponsored program is of critical national importance. It represents the first major commitment of the U.S. Air Force to locate personnel at Stennis. The SBL program will invest \$100 million in facilities at Stennis that will add to our unique national capability. This program means greater opportunities for our local residents and particularly our university graduates who can find outstanding technical jobs right here at home.

Stennis Space Center has tremendous future potential. With this announcement, we will be approaching the 5,000 mark in the number of personnel on site, and we could see our numbers grow to 10,000 over the next five years.

I personally welcome the SBL program to our Stennis family. I know all of us will work to ensure that their presence at Stennis is a lasting one and that we will make them proud to call Mississippi their home.

NEWSCLIPS

Do You Hear Earth Noises? If humans had radio antennas instead of ears, we would hear a remarkable symphony of strange noises coming from our own planet. Scientists call them tweeks, whistlers and sferics. They sound like background music from a flamboyant science fiction film, but this is not science fiction. Earth's natural radio emissions are real and, although we're mostly unaware of them, they are around us all the time. You can now listen to them through a special receiver at NASA's Marshall Space Flight Center in Huntsville, Ala. It's broadcasting the peculiar songs of Earth live on the Web 24 hours a day at http://science.nasa.gov/headlines/y2001/ast19jan_1.htm.

Final contact made with world's oldest spacecraft — Thirty-five years after it left Earth, Pioneer 6 continues to set records and amaze personnel who have tracked its progress over the years. Project team members at the Jet Propulsion Laboratory in Pasadena, Calif., made their final contact with the satellite early last December. Pioneer 6 not only has set a record for longevity, but has provided along with its successors Pioneers 7, 8 and 9, a wealth of information about the solar system and serves as the world's first solar monitoring network.

NASA scientists use hands-off approach to land jet — Imagine being able to land a jumbo jet without ever taking control of the stick. NASA scientists recently demonstrated the ability to control a 757 passenger jet simulation, using only human muscle-nerve signals linked to a computer. Scientists from the neuroengineering laboratory at NASA's Ames Research Center, Moffett Field, Calif., outfitted the pilot with an armband implanted with eight electrodes.

According to the researchers, this new technology is significant in that neuroelectric control of computers can replace computer keyboards, mice and joysticks for some uses.



Newly elected board members of Partners for Stennis, a group of Mississippi and Louisiana coastal leaders working to support Stennis, include, seated from left, Carleen Moran, secretary; Randy Holland, assistant secretary/treasurer; and Tom Keenan, treasurer. Standing, Jack Caldwell, vice chairman; and Roy Keller, chairman.



Stennis Space Center's Public Affairs Officer Myron Webb, right, accepts a plaque from J.C. Burns, director of the Mississippi Development Authority, at the annual Governor's Conference on Tourism in Jackson Feb. 6.

StenniSphere chosen top travel attraction

Stennis Space Center's StenniSphere was named Mississippi's Travel Attraction of the Year 2000 by the Mississippi Tourism Association.

The Mississippi Travel Attraction of the Year award is given in recognition of those organizations that make outstanding contributions to the advancement and promotion of tourism in Mississippi.

StenniSphere, the 14,000-square foot visitor center, has recorded over 172,000 visitors since opening in May 2000.

Atlantis lifts off, taking U.S. Laboratory Destiny to International Space Station crew

Atlantis' five astronauts lifted off from the Kennedy Space Center at sunset Feb. 7 to deliver the U.S. Laboratory Destiny to the International Space Station (ISS), the cornerstone of scientific research on the complex and the new command and control center for Station operations.

Commander Ken Cockrell, Pilot Mark Polansky and Mission Specialists Bob Curbeam, Marsha Ivins and Tom Jones rocketed away from Launch Pad 39-A at 5:13 p.m. (CST), lighting up the central Florida skies as they began their pursuit of the international complex.

With the successful launch behind them, Atlantis' astronauts turned their attention to their chase of the space station.



Onlookers view the launch of the Space Shuttle Atlantis on Mission STS-98 to the International Space Station from Kennedy Space Flight Center Feb. 7. A shadow called the Burgeon Effect points to the rising Moon in the lower right corner of the picture. (Duffin McGee/Reuters)

Over the ensuing week, the crew will perform three space walks as they help to install and hook up the 16-ton Destiny research lab.

NASA astronauts of the new millennium



Members of the Astronaut Candidate Class of 2000 visited Stennis Space Center Jan. 18 and witnessed a test firing of a Space Shuttle Main Engine. Members included seven pilots and 10 mission specialists representing each branch of the armed services, private industry and academia. Members of astronaut candidate classes visit all NASA space flight centers during their training to see firsthand what is involved in keeping the Space Shuttles operational.



Stennis celebrates Black History Month

More than 200 Stennis Space Center employees and guests attended the annual Black History Month celebration Feb. 8 in the StenniSphere auditorium. This year's theme was "A White Man's Journey Through Black History." Stennis Space Center Director Roy Estess, center, delivered the welcome address, and Capt. Larry Warrenfelz, chief of staff for the Commander, Naval Meteorology and Oceanography Command at Stennis, introduced Dr. Joel Freeman, right, who was guest speaker. The Saint Rose de Lima Catholic Church choir, top, of Bay St. Louis performed musical selections. The program concluded with remarks from Commander Peter Furze of the Naval Oceanographic Office.



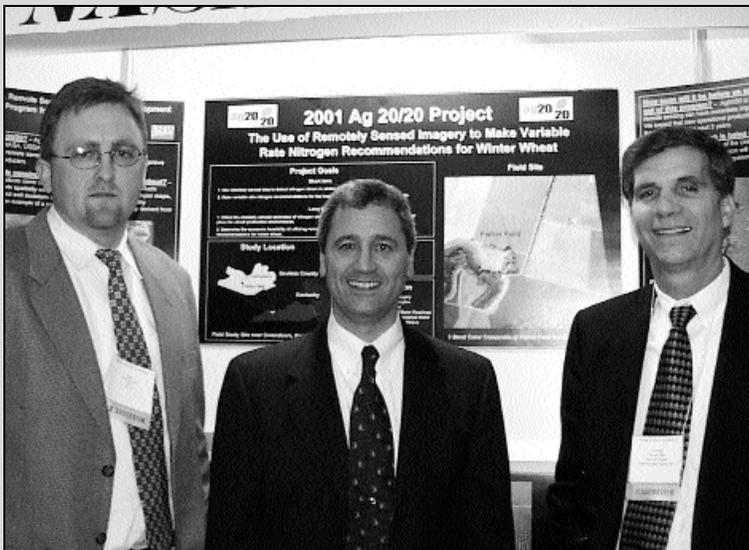
Agency recognized for 2000 multicultural contract award efforts

Efforts by its Office of Small and Disadvantaged Business Utilization paid off recently when NASA was named one of America's top 50 organizations for providing multicultural business opportunities. NASA received the honor after the first Internet-based election involving more than 50,000 of America's leading women- and minority-owned businesses.

"As a premier high-technology federal agency, we're happy to know that we're on the right track," NASA's Ralph Thomas, associate administrator of the Small and Disadvantaged Business Utilization said. "We consider this award to be an endorsement from the small and multicultural business communities of the innovative programs and initiatives we implement to attract those firms that have provided us with high-quality goods and services at the lowest practicable cost."

Fiscal year 2000 was a banner year for NASA. The Agency awarded more than \$2 billion in contracts to minority- and women-owned firms.

The figure represents 18.3 percent of NASA's total contract dollars and is NASA's highest accomplishment ever with such firms. It compares with just 7.2 percent or \$865 million in FY 1992.



Stennis representatives participated in the 2001 Wheat Industry Conference and Exposition held Jan. 29 - Feb. 3 in New Orleans. Dr. Larry DeLucas (center), former astronaut and current Director of Center for Biophysical Sciences and Engineering at the University of Alabama at Birmingham, was the keynote speaker for the event titled "Harvesting New Technology." Pictured with Dr. DeLucas are Rodney McKellip (left), Ag 20/20 project manager of the NASA Geospace Applications and Development Directorate at Stennis, and Dr. George May, director of Spectral Visions and ProVision Technologies at the Institute for Technology Development at Stennis.

Kim Guin's family roots grow strong at Stennis

For Kim Guin, Stennis Space Center is a special family. Not only because she met her husband here or because her mother-in-law works here, and her father-in-law was one of the first employees of the new test site back in the 60's, but because the people of Stennis have always been there for her — like surrogate parents.

Kim's father died during her senior year in high school, and her mother passed away three years later when Kim was only 21. It was the following year that she came to Stennis as a secretary in the Center Operations Group at the urging of her friend, Renae Nelson.

"I felt like I was the youngest person at NASA," Kim said. "The people at NASA just took me in and became my family."

It was in her first year at Stennis that Kim met her future husband, Danny Guin, who now works for Lockheed Martin at the E Complex. After about four months, they knew they wanted to marry. This decision meant that Kim would need to change jobs at Stennis. Her future father-in-law, Harry Guin, was director of the Propulsion Test Directorate and her boss.

"He was a sweet teddy bear kind of person," she said. "If you mention his name



around here, people who have been here a while still smile."

From Center Ops, Kim went to NASA Public Affairs.

"I really enjoyed working with Myron [Webb] and Mack [Herring]," Kim said. "Believe it or not, Mack and Myron helped me plan my wedding!"

Kim then went to work for the Safety and Quality Office for six years before moving to the Office of Finance as an accounting technician in 1991.

A native of Carriere, Kim is one of five sisters. Kim said her upbringing was strict, but loving. She said the boundaries her parents set for her were an important foundation for the person she is today.

"I wouldn't trade the way I was raised

for all the world," she said. "We never had money, but we were never in want."

Now Kim is setting boundaries for her two active children. She lives in Diamondhead with her husband Danny, son Trae, 11, and daughter Chloe, 6.

All four members of the Guin family enjoy University of Alabama football, Kim said. "We're huge Alabama fans. We love to go to the games. Needless to say, I'm going to push Alabama as a college for the kids."

The Guins also spend leisure time working with the youth group at Diamondhead United Methodist Church. "We teach Sunday School class and work with the teenagers," she said. "I'd like to give some hope to the teens. The pressure on them is huge — trying to figure out who they are and where they fit in."

Looking toward the future, Kim said she hopes to see the next generation of Guins working with her at Stennis.

"The way things have been going, there's a good chance that my kids will work out here," she said. "I know I'd like to finish my career here. I've planted my roots here, and I plan to grow here."

Qualification testing on X-33 dual flight engines now under way

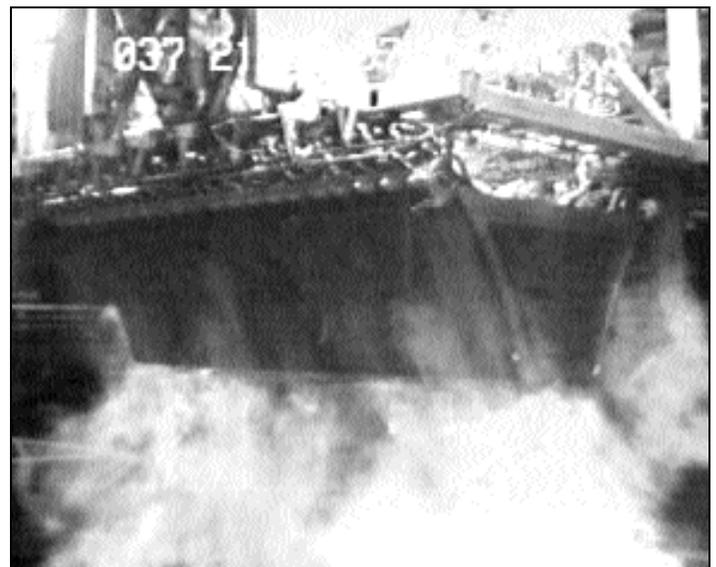
Qualification test firings of the unique engines designed to propel America's X-33 space plane into high-speed, suborbital flight in 2003 began Tuesday, Feb. 6 at Stennis Space Center.

The ignition test successfully completed the full scheduled duration of 1.12 seconds. Initial tandem test firings of the XRS-2200 Linear Aerospike engines will be short bursts such as this, eventually leading to durations required to send the unpiloted vehicle from a launch pad in California to landings in either Utah or Montana.

The engines will power the X-33, a half-scale, sub-orbital flight demonstrator of technology required for a reusable launch vehicle. "Initial indications are all test objectives were met in this first test of the flight engines," said Mike McKeon, program manager for the XRS-2200 aerospike engine at the Rocketdyne Propulsion & Power business of The Boeing Company. "We are now reviewing the data and preparing to move into longer duration testing."

"I'm excited about beginning this phase of testing," said Dr. Don Chenevert, NASA's X-33 project manager at Stennis. "I'm confident the remainder of dual-engine testing will perform as well as this initial ignition test."

Eight more test firings of the twin flight engines are planned at
See DUAL ENGINE, Page 7



Qualification test firings of the unique engines designed to propel America's X-33 space plane into high-speed, suborbital flight in 2003 began this month on the A-1 test stand at Stennis Space Center.

NASA's Starship 2040 traveling exhibit debuts at StennisSphere

More than 2,500 visitors boarded Starship 2040 for its debut at StennisSphere Feb. 1-3. Starship 2040 is an exciting new interactive walk-through traveling exhibit highlighting commercial space travel of the future.

Starship 2040 invites the public to experience what commercial spaceflight might be like in the future. Visitors walk through a full-sized mock-up of the spacecraft's control, passenger and engineering compartments.

The exhibit, designed and produced at Marshall Space Flight Center in Huntsville, Ala., is part of NASA's national touring exhibits program. Starship 2040's visit to Stennis kicked off a seven-city tour across Mississippi and Alabama. The exhibit then began a series of nationwide public tours to national-level industry conferences.

Stennis employees enjoyed a special sneak preview of Starship 2040 on the afternoon of Thursday, Feb. 1. Starship 2040 was then open to school groups on Friday. More than 1,000 students from area schools enjoyed a trip into the future aboard Starship 2040. The general public visited Saturday.

For more information on the Starship 2040 exhibit and future tour dates, log on to the Starship 2040 Web site at www.star

ship2040.com.



Stennis employees enjoyed a sneak preview of the Starship 2040 exhibit on the afternoon of Feb. 1. The exhibit, designed by Marshall Space Flight Center in Huntsville, Ala., kicked off its nationwide tour at Stennis. Starship 2040 gives visitors a look at the future of commercial spaceflight.



Office of Education accepting applications for SHARP students

The NASA Office of Education at Stennis Space Center is currently accepting student applications for this year's Summer High School Apprenticeship Research Program (SHARP).

SHARP is a NASA-sponsored, research-based mentoring program for students who excel in mathematics, engineering, science and technology. The program is designed to provide students in under-represented categories an opportunity to build a career path in these disciplines.

To be eligible, students must be a U.S. citizen, at least 16 years of age by the start of the program in June, and a permanent resident (in

***Application deadline is
Wednesday, Feb. 28***

accordance with state residency requirements). The student must attend a school within a 50-mile radius of the participating NASA field installation and be available on a full-time basis for the duration of the program.

Eligibility requirements also include the completion of at least two college preparatory courses in both mathematics and science with

a "B" average or above in each and an overall "B" or above in other courses.

In addition, the student must demonstrate an interest in and aptitude for careers in math, engineering, science or technology and be willing to participate in a formal interview as part of the placement process if chosen as a finalist.

Applications have been mailed to area schools. Students interested in participating should contact their school guidance counselors. Deadline for applications is Feb. 28.

For additional information, contact Wanda Wright-Trollinger at (228) 688-2455, or visit the Web site www.mtsibase.com/sharp.

IMPACT . . .

(Continued from Page 1)

ties include a new aerospace technology park and the growing utilization of the Army Ammunition Plant, which is an industrial park with expansive technical capabilities. We are up to about 4,600 employees to date, and we expect that to grow as we move forward.”

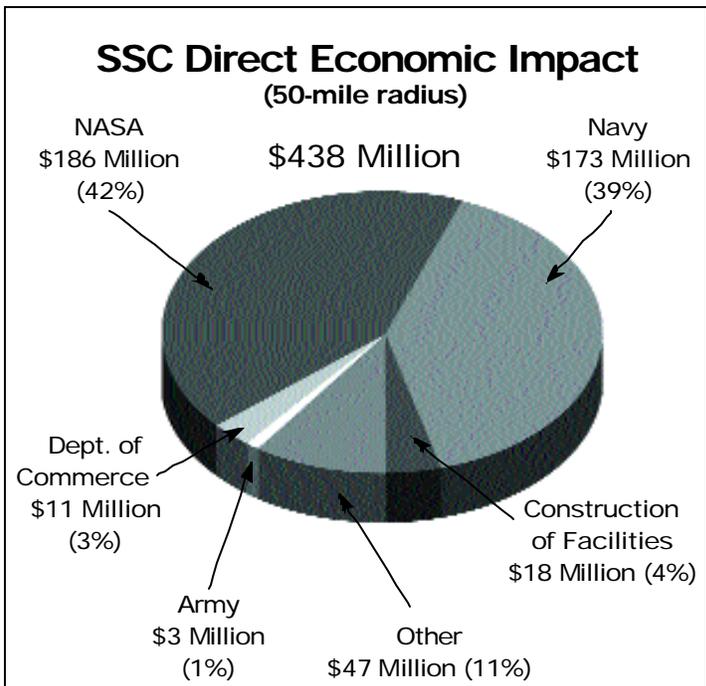
“I want to focus on the quality, reputation and capability that reside at Stennis from a Navy perspective,” Donaldson said. “We own bragging rights for the greatest concentration of oceanographers and hydrographers in the world. No other organization — military or civilian — predicts the environment from the bottom of the oceans to the top of the atmosphere for the warfighter, and the headquarters is here at Stennis.”

NASA gathers its yearly economic impact information and compiles it with economic information from the more than 30 other resident agencies and seven major contractors at Stennis. The information is provided to Dr. Charles Campbell, professor of economics at Mississippi State University. Campbell analyzes the information and provides an assessment of the center’s total economic impact. Jon Roth, assistant to Stennis Space Center Director, presented an overview of the new economic impact figures.

According to Roth, the annual report estimated that area employment would have been reduced by 24,121 jobs if Stennis Space Center had not been in operation during the last fiscal year. The estimate takes into account the direct and indirect effects within a 50-mile radius of the space center. The area includes Hancock, Harrison and Pearl River counties in Mississippi and St. Tammany Parish in Louisiana.

The report also showed that had Stennis not been in operation in fiscal year 2000, personal income would have been reduced by more than \$807 million. Retail sales would also have been reduced by more than \$323 million. Estimates are that Stennis has a tax revenue impact of \$87 million on local government revenues.

Detailed in the report was the residential distribution of the center’s 4,558 employees: 1,277 lived in Pearl River County, Miss.; 966 lived in St. Tammany Parish, La.; 966 lived in Hancock County, Miss.; 890 lived



in Harrison County, Miss.; 235 lived elsewhere in Louisiana; 168 lived elsewhere in Mississippi; and 56 lived in states other than Mississippi or Louisiana.

Of the 4,558 employees at Stennis, 37 percent were involved in scientific and engineering fields; 29 percent were technicians or were involved in craft or production trades; 18 percent worked as business professionals; 10 percent held clerical positions; and 6 percent were employed in other areas.

Among civil service and military employees, 6 percent held doctorate degrees; 18 percent held a master’s degree; 34 percent held a bachelor’s degree; and 9 percent held an associate’s degree.

Partners for Stennis is a group of Mississippi and Louisiana community leaders that support and enhance the development of agencies and programs at Stennis Space Center.



Visitors from France’s Snecma Moteurs group visited Stennis Space Center Monday, Feb. 5 for briefings by NASA and Boeing Rocketdyne personnel on the XRS-2200 Linear Aerospike Engine. The engine will be used to propel the X-33 technology demonstrator space plane into suborbital flight in 2003. From left, Brian Sproles, Boeing Rocketdyne; Guy Corteel; Marc Lacoste; and Eric Bachelet, all of Snecma; Dr. Donald Chenevert, NASA’s X-33 project manager at Stennis; Mike McKeon, Boeing Rocketdyne; and John Vinson, Lockheed-Martin Skunk Works.

DUAL ENGINE . . .

(Continued from Page 5)

Stennis before they are delivered to Lockheed Martin’s X-33 assembly facility in Palmdale, Calif. Fourteen single-engine test firings of a development configuration of the unique Linear Aerospike engine were successfully completed at Stennis in May 2000.

Boeing Rocketdyne developed the XRS-2200 Linear Aerospike engine at its Canoga Park, Calif., facility. The NASA/Boeing Rocketdyne team at Stennis did final engine assembly.

The X-33 project is being developed under a cooperative agreement between NASA and Lockheed Martin Space Systems Company in Denver.

**Safety
Corner**

**OSHA
software
available**

The Occupational Safety and Health Administration (OSHA) was recognized as a finalist for the prestigious Innovations in American Government Award for its specialized Expert Advisor software last August. Advisor is a series of interactive software programs that make it easier to understand OSHA's regulations, especially for those with little background in workplace safety and health. They help businesses answer a few simple questions and provide reliable answers on how regulations apply to their specific workplaces.

To use Expert Advisors, employers and employees download the software, answer simple questions, and then receive reliable answers tailored to their needs. These interactive, problem-solving systems help users recognize common workplace safety and health hazards. Currently, OSHA Expert Advisor software is available on topics such as fire safety, hazard awareness, asbestos, lead-in construction, lockout/tagout, cadmium, respiratory protection, cost of injury, and lead-in general industry. The software is available free online at OSHA's Website at www.osha.gov.

QUICK LOOK

■ **Volunteers and sponsors are needed to help with the annual Area III Special Olympics** to be held March 27 at Stennis. A pre-game picnic/fund raiser, catered by Montana's Bar-B-Q and Seafood in Gulfport, will be held on site March 7. For additional information, contact Becky Rotundo at Ext. 5328 or becky.rotundo@nrlssc.navy.mil.

■ **February is American Heart Month.** The Wellness Center is offering a lipid profile (total cholesterol, HDL-c, LDL-c, triglycerides, and blood glucose) on Tuesday, Feb. 27 from 7 a.m. - 8:30 a.m. A prostate-specific antigen test will also be offered. The cost of each screening is \$15. Call Ext. 3950 to schedule an appointment.

■ **The Blood Center,** serving Louisiana and the Mississippi Gulf Coast counties, has scheduled the 'Krewe of Lifesavers' blood drive. Donation hours in the Conference Center of Bldg. 1100 are from 9 a.m.-5 p.m. Tuesday, Feb. 20; and from 9 a.m.-3 p.m. Wednesday, Feb. 21. The Blood Center blood mobile will be at Bldg. 8301 from 12:30 - 4 p.m. Thursday, Feb. 22. King cake and door prizes are available to participants.

LASER . . .
(Continued from Page 1)

will make on our area and look forward to working with DoD to make this important national initiative a success."

Stennis Space Center, NASA's lead center for rocket propulsion testing and remote sensing applications, currently employs 4,600 people. The SBL project is expected to eventually create 1,000 jobs and have a total economic benefit on surrounding communities of about \$100 million over five years.

"This is obviously very good news for the employees of Stennis and a good decision for our nation's national security as a whole," Sen. Lott said. "Stennis Space Center is becoming a focal point for some of our nation's most advanced aerospace research and development - a fact with very positive implications for our state's economy and our efforts to create more high-paying jobs for Mississippians."

The SBL is half of a two-part operation consisting of the test facility and a space qualification facility. Sen. Lott said the decision affects only the performance test facility. The location of the other component will be determined at a later date.

Currently, the program consists of an 18-month \$127-million award to the three joint contractors - TRW, Boeing and Lockheed Martin. The companies will focus on maturing the technologies and reducing the technical risks required to build and deploy a space-based demonstration of the 12-year space-based integrated flight experiment.

LAGNIAPPE

Lagniappe is published monthly by the John C. Stennis Space Center, National Aeronautics and Space Administration. Roy Estess is the center director, Myron Webb is the public affairs officer, and Lanee Cooksey is the news chief. Comments and suggestions should be forwarded to the Lagniappe Office, Building 1200, Room 208D, Stennis Space Center, MS 39529, or call (228) 688-3585.

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