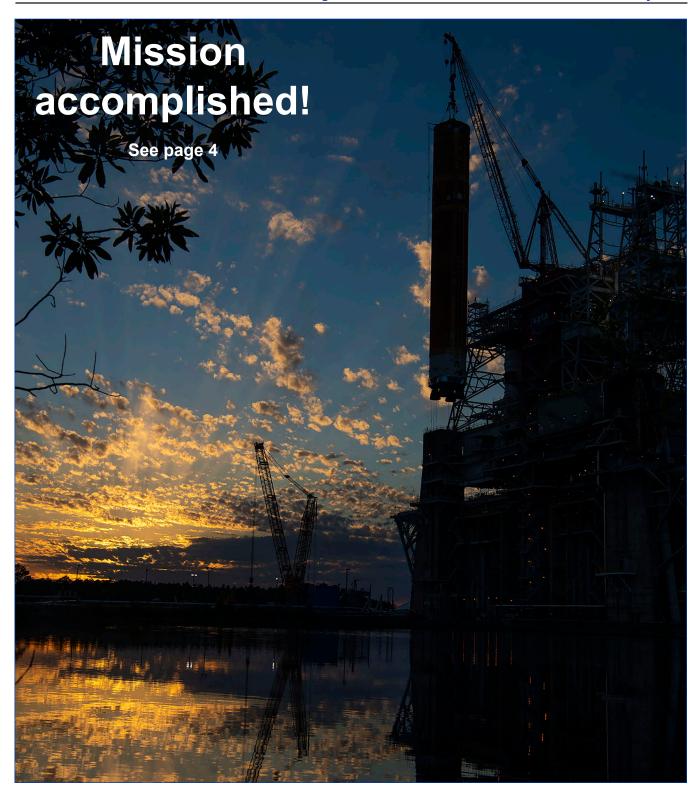
Volume 17 Issue 5

www.nasa.gov/centers/stennis

May 2021



ith Green Run testing behind us and the Space Launch System core stage now in its new home near my gator cousins who live in Florida's Banana Creek – ark! – this month is a nice time to reflect on a mission accomplished. From the core stage's delivery to its departure, the testing project involved the entire Stennis team. It goes without saying, our offices and directorates across the center worked together like a well-oiled machine.

With every challenge and obstacle, the entire Stennis team pressed on, demonstrating unity and resolve every step of the way. Even in the end, when Mother Nature brought in some gusty weather as the time came to lower the core stage for its voyage on the Pegasus barge, the work crews kept cool and completed a job well done. Ark!

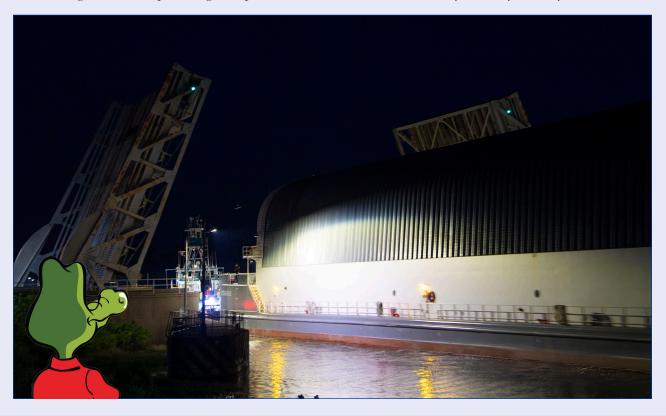
How was this mission accomplished? For one thing, the "can do" and "will do" attitude is in the DNA of the Stennis family. Whether the work involves procurement, center operations, legal, engineering and testing, communications, site security, or otherwise, the team is united by a determination to get things done. This gives rise to a prevailing workplace culture

that brings out the best in everyone. That is the Stennis way: pursuing excellence through hard work and collaboration across different working groups.

The recent 2020 Employee Viewpoint Survey reflects Stennis' recipe for success, with employees reporting high levels of work engagement and work satisfaction.

Nearly 87% of Stennis folks reported high work engagement, a measure of their views and relationships with leaders, as well as their feelings of motivation and work competency. Likewise, a touch more than 86% reported high levels of satisfaction with their work experience. This reflects folks' views about their job, work units, and pay, as well as if they would recommend their organization as a good place to work. A whopping 97% reported the people they work with all cooperate together to get the job done.

Stennis succeeds because the folks here love their work, are empowered to do their work, and understand the importance of working together to accomplish great things. That is the story of Stennis from the beginning, and that is the story that continues to be written to this day – a story of unity.



Lagniappe is published monthly by the Office of Communications at NASA's John C. Stennis Space Center.

Access monthly copies at: www.nasa.gov/centers/stennis/news/publications/index.html

Contact info – (phone) 228-688-3749; (email) ssc-pao@mail.nasa.gov; (mail) NASA OFFICE OF COMMUNICATIONS,

Attn: LAGNIAPPE, Mail code IA00, Building 1100 Room 304, Stennis Space Center, MS 39529

Managing Editor – Lacy Thompson Editor – Kaylan Courteaux Staff Photographer – Danny Nowlin



Vice president swears in new NASA administrator

Former Senator, Bill Nelson, is sworn-in as the 14th NASA Administrator by Vice President Kamala Harris (r), as his wife, Grace Nelson, holds their family Bible, and his daughter, Nan Ellen Nelson looks on during a May 3 ceremony in the Old Executive Office Building in Washington, DC. A Moon rock collected by astronaut John Young during the Apollo 16 mission can be seen on display, and former NASA Administrators Jim Bridenstine (virtually on laptop) and Charles Bolden were present for the occasion.



en. Bill Nelson took office as the 14th administrator of NASA on May 3, after he was given the oath of office by Vice President Kamala Harris during a ceremony at the Eisenhower Executive Office Building in Washington, DC.

In his new role at NASA, Nelson will lead the nation's space program as it carries out critical missions, including landing the first woman and first person of color on the Moon with the Artemis program, expanding climate change research, fostering innovation, and enhancing the U.S. economy and STEM workforce.

"It's an honor to be sworn in by Vice President Harris to serve as NASA administrator, and I look forward to a continued, strong relationship with her as chair of the National Space Council," Nelson said after the ceremony. "I want to thank Steve Jurczyk for his leadership as Acting Administrator over the past few months, helping to carry out the Biden-Harris Administration's priorities and ensuring the success of NASA's goals and missions. You've seen the incredible accomplishments at NASA over the past 100 or so days – the proof is in the pudding."

As part of the swearing-in ceremony, Vice President Harris and Nelson were joined via video conference by Jim Bridenstine, who preceded Nelson as administrator, and in-person by Charles F. Bolden, who served as administrator from 2009 to 2017. Nelson's family and Pam Melroy, nominee for NASA deputy administrator, were guests at the ceremony.

"I was glad to be joined today by my rock, my wife, Grace, my children, deputy administrator nominee Col. Pam Melroy, and former NASA Administrators Charlie Bolden and Jim Bridenstine, whose standing with me symbolizes the continuity of purpose and bipartisanship," Nelson said. "It's an incredible time for the aerospace sector, and I'm excited to lead NASA's workforce into an exciting future!"

"Congratulations, Mr. Administrator, for all the work you've done and all you've dedicated to our country," Vice President Harris said. "I couldn't agree more that this has to be about our nation and what is best for our nation, unencumbered by partisan politics, but based on what we know is the right thing to do."

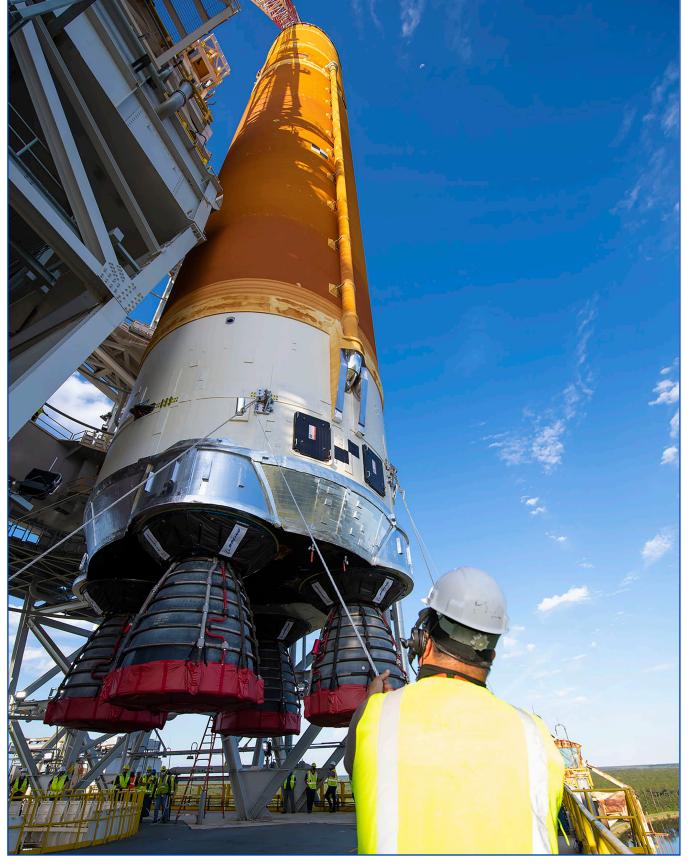
The U.S. Senate confirmed Nelson to serve as the NASA administrator April 29.

Nelson has an extensive history of working with NASA and has been integral to the agency's current successes. Prior to his nomination, he was a member-at-large on NASA's advisory council. From 2001 to 2019, Nelson represented Florida in the U.S. Senate, where he served as ranking member of the Committee on Commerce, Science and Transportation and led its Subcommittee on Science and Space.

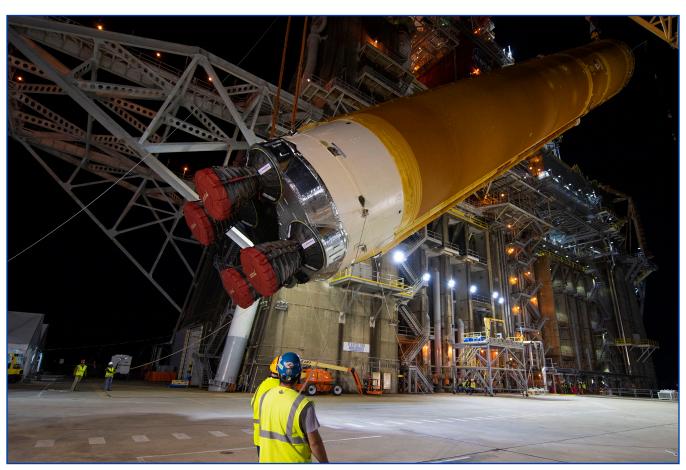
Previously, Nelson represented Florida's 9th and 11th districts in the U.S. House of Representatives. While chair of the House space subcommittee, Nelson flew aboard space shuttle Columbia as a payload specialist on the STS-61C mission in 1986, where he conducted 12 medical experiments including the first American stress test in space and a cancer research experiment sponsored by university researchers. The mission also included Bolden, as pilot.

NASA removes SLS core stage for Artemis Moon mission from Stennis test stand

Space Center worked April 19-20 to remove the first flight core stage of the agency's Space Launch System rocket from the B-2 Test Stand in preparation for its transport to Kennedy Space Center in Florida. Operations required crews to lift the core stage from its vertical placement in the stand and lower it to a horizontal position on the B-2 Test Stand tarmac (page 5 photos). The stage was then loaded on NASA's Pegasus barge for transport to Kennedy, where it is being prepared for launch of the Artemis I mission. Removal of the rocket stage followed completion of a series of eight Green Run tests over the past year. During the Green Run series, teams performed comprehensive tests of the stand's sophisticated and integrated systems. The series culminated in a hot fire of the stage's four RS-25 engines on the B-2 stand March 18. During the hot fire, the four engines generated a combined 1.6 million pounds of thrust, just as during an actual launch. The test was the most powerful performed at Stennis in more than 40 years. NASA is building SLS, the world's most powerful rocket, to return humans to deep space missions. As the backbone of NASA's Artemis program, SLS will return humans, including the first woman and first person of color, to the surface of the Moon to establish a sustainable presence and prepare for eventual missions to Mars.







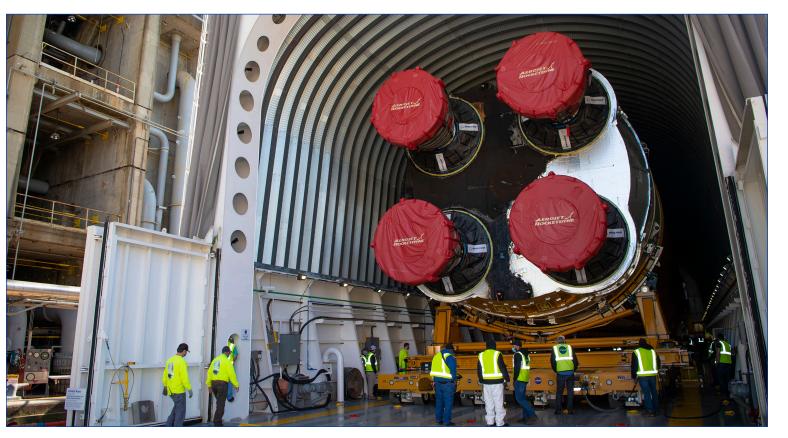


NASA's Space Launch System core stage heads to Kennedy Space Center



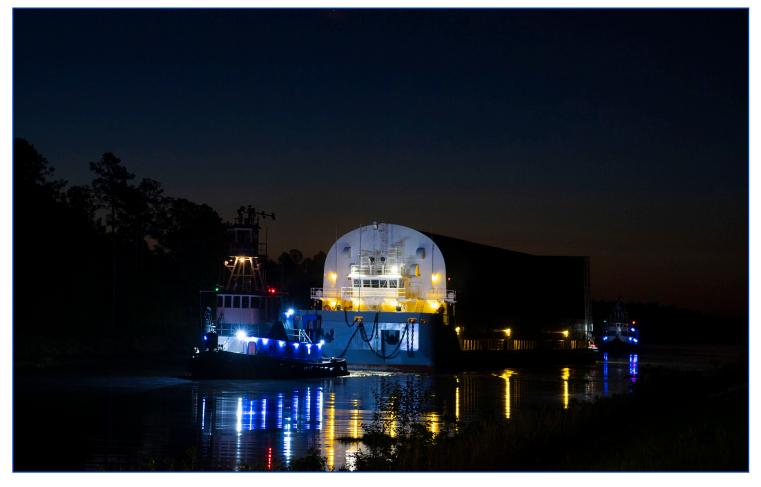
The first core stage of NASA's Space Launch System (SLS) rocket was loaded and departed Stennis Space Center on April 21-22, following completion of the Green Run series of tests of its design and systems. The stage was transported aboard NASA's Pegasus barge to Kennedy Space Center in Florida, its final stop prior to NASA's launch of the Artemis I mission around the Moon. At Kennedy, the core stage is being integrated with the rest of the SLS rocket and the Orion spacecraft in preparation for launch. Through the Artemis program, NASA will return humans, including the first woman and the first person of color, to the Moon and prepare for eventual journeys to Mars. NASA is building SLS as the world's most powerful rocket to serve as the backbone of the Artemis program and the nation's future deep space exploration missions. The SLS core stage is the tallest flight component ever built by NASA and is equipped with four RS-25 engines. Built by prime contractor Boeing at NASA's Michoud Assembly Facility in New Orleans, the stage was delivered to Stennis in January 2020. Once installed on the B-2 Test Stand, the series of eight Green Run tests began. After pausing for about two months at the start of the COVID-19 pandemic, the work continued with new safety and health protocols in place. The team also endured a record-setting hurricane season that featured multiple storms. Nevertheless, each stage system - including avionics, hydraulics, and propulsion - were turned on and checked out during the eight-test campaign that concluded with a hot fire of the stage's RS-25 engines, just as during an actual launch. After an initial hot fire test of the engines experienced an automatic shutdown early this year, teams conducted a second test March 18, characterized by agency spokespersons as "flawless." During the test, the engines fired for more than eight minutes, generating a combined 1.6 million pounds of thrust and representing the most powerful test conducted at Stennis in more than 40 years. The test team then worked to refurbish the stage for launch and to remove it from the B-2 Test Stand, a precise operation that requires optimal weather and wind conditions. Teams succeeded in removing the stand April 19-20, lifting it from its vertical installed position and using a pair of cranes to break it over and lower it to a horizontal position on the B-2 Test Stand tarmac. Following operations to prepare the stage, teams used specially designed transporters to load and hold the massive stage on the Pegasus barge. It departed early on April 22, traveling through the Stennis lock and via the Pearl River to the Gulf of Mexico (page 7 photos). The work at Stennis was conducted by a multifaceted team of employees from NASA; Boeing, lead contractor for the SLS core stage; Aerojet Rocketdyne, lead contractor for the RS-25 engines; and Syncom Space Services, lead contractor for facility maintenance and operations at Stennis and Michoud.













SLS core stage arrives at Kennedy Space Center



After its journey from NASA's Stennis Space Center aboard the Pegasus barge, the core stage of the Space Launch System (SLS) rocket arrives at the agency's Kennedy Space Center on April 27, 2021. Shown against a Florida sunrise, the core stage is the final piece of Artemis hardware to arrive at the spaceport. Following arrival, engineers with Exploration Ground Systems and lead contractor Jacobs offloaded the core stage and moved it to the center's Vehicle Assembly Building (below) for integration atop the mobile launcher with the completed stack of solid rocket boosters ahead of the Artemis I launch. The SLS will be the most powerful rocket in the world, producing up to 8.8 million pounds of thrust during its Artemis I launch. Artemis I will be an uncrewed test of the Orion spacecraft and SLS rocket as an integrated system ahead of crewed flights to the Moon. Under the Artemis program, NASA aims to land the first woman and the first person of color on the Moon to establish sustainable lunar presence and prepare for human missions to Mars.



NASA continues RS-25 single-engine testing for future Artemis missions

NASA conducted a long-duration RS-25 single-engine test April 28, continuing its sevenpart test series to support development and production of engines for future missions of the agency's Space Launch System (SLS) rocket. Operators fired the engine for almost 11 minutes (650 seconds) on the A-1 Test Stand at Stennis Space Center, providing valuable data to Aerojet Rocketdyne, lead contractor for the SLS engines, as it begins production of new engines for use after the first four SLS flights. Four RS-25 engines, along with a pair of solid rocket boosters, will help power SLS at launch. Engines for the rocket's first four Artemis program missions to the Moon already have been tested on the A-1 Test Stand at Stennis. Operators now are focused on collecting data to demonstrate and verify various engine capabilities, evaluate new engine components manufactured with cutting-edge and cost-saving technologies, eliminate operating risks, and enhance engine production. The latest 650-second duration test represents the time three engines would have to fire to burn up propellant and power SLS to orbit, if the fourth engine shut down early during launch. The longer time also allows operators to schedule and meet more performance objectives during a test. Operators fired the engine at 113% of its original power level for a period of time April 28 as well. RS-25 engines must fire at 111% to help power the launch of SLS; firing at 113% helps operators to test a margin of safety. The hot fire also marked the second test of a new NASAdesigned thrust vector control (TVC) system used to gimbal engines for the test. "Gimbaling" refers to how the engine must move to ensure proper flight trajectory. During the April 28 test, operators demonstrated the ability of the new TVC to move engines on both a tight circular axis and back-and-forth on a line. With the Artemis program, NASA will land the first woman and the first person of color on the Moon and establish sustainable exploration in preparation for missions to Mars. SLS and NASA's Orion spacecraft, along with the commercial human landing system and the Gateway in orbit around the Moon, are NASA's backbone for deep space exploration. SLS is the only rocket that can send Orion, astronauts, and supplies to the Moon in a single mission. RS-25 tests at Stennis Space Center are conducted by an integrated team, including NASA, Aerojet Rocketdyne, and Syncom Space Services, the prime contractor of Stennis facilities and operations.





NASA's Ingenuity Mars Helicopter completed its fifth flight on the Red Planet on May 7 with its first one-way journey from Wright Brothers Field (the name of its Martian home base) to an airfield 423 feet to the south. After arrival above its new airfield, Ingenuity climbed to an altitude record of 33 feet and captured high-resolution color images of its new neighborhood before touching down. The flight lasted 108 seconds. The trip marked the first time the historic helicopter flew to a new landing site. The Ingenuity team chose the new landing site based on information gathered during the previous flight – the first "aerial scout" operation on another world – which enabled them to generate digital elevation maps indicating almost completely flat terrain with nearly no obstructions. The solar-powered helicopter became the first aircraft in history to make a powered, controlled flight on another planet during an April 19 operation. Ingenuity landed on Mars with NASA's Perseverance rover on February 18.

NASA in the News

Rover extracts 1st oxygen from Mars

The growing list of "firsts" for Perseverance, NASA's newest six-wheeled robot on the Martian surface, includes converting some of the Red Planet's thin, carbon dioxide-rich atmosphere into oxygen. While the technology demonstration is just getting started, it could pave the way for isolating and storing oxygen on Mars to help power rockets that could lift astronauts off the planet's surface. Such devices also might one day provide breathable air for astronauts. A toaster-sized instrument aboard Perseverance called the Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE) accomplished the task. The test took place April 20, the 60th Martian day since the rover landed Feb. 18. MOXIE works by separating oxygen atoms from carbon dioxide molecules, which are made up of one carbon atom and two oxygen atoms. A waste product, carbon monoxide, is emitted into the Martian atmosphere. In this first test, MOXIE's oxygen production was modest – about 5 grams or about 10 minutes of breathable oxygen for an astronaut. MOXIE is designed to generate up to 10 grams of oxygen per hour.

Mars Odyssey marks 20-year milestone

NASA's 2001 Mars Odyssey spacecraft has marked an anniversary in its exploration of the Red Planet. Odyssey launched 20 years ago on April 7, making it the oldest spacecraft still working at the Red Planet. The orbiter, which takes its name from Arthur C. Clarke's classic sci-fi novel "2001: A Space Odyssey" (Clarke blessed its use before launch), was sent to map the composition of the Martian surface, providing a window to the past so scientists could piece together how the planet evolved. It has done far more than that, uncovering troves of water ice, serving as a crucial communications link for other spacecraft, and helping to pave the way not just for safer landings but also future astronauts. Odyssey's two decades of data have been a boon for researchers working to determine where water ice is locked up on the planet. It has provided invaluable data on the composition of Mars and also provided 1 million images that have helped NASA determine where to send landers and rovers to land on the planet. To learn more regarding Odyssey and its Martian mission, visit here and here.

2021 NASA Honor Awards

Stennis Space Center Director Rick Gilbrech and NASA Associate Administrator for Human Exploration and Operations Kathy Leuders presented NASA Honor Awards to Stennis employees during a virtual ceremony May 6.

Two Stennis employees recieved NASA's Outstanding Leadership Medal. This medal is awarded to government employees for notable leadership accomplishments that significantly influenced the NASA mission.

Curtis D. Armstrong received a NASA Outstanding Leadership Medal for his leadership in the advancement and transfer of



NASA technology, transforming Stennis into an agency powerhouse of autonomous systems. As chief of the Test Technology Branch in the Stennis Engineering and Test Directorate, Armstrong has led in the creation of the Stennis Autonomous Systems Lab and has been an asset in the creation of technology partnerships and business opportunities. He is recognized as a strategic thinker, influencing policy and future vision planning.

Maury A.
Vander received a
NASA Outstanding Leadership
Medal for his sustained leadership
as Chief of Test
Operations in the



Stennis Engineering and Test Directorate. He has mentored and guided personnel of various backgrounds, cultures, disciplines, and experiences to build a well-choregraphed team. Since joining the NASA team in 2000, Vander has ensured the success of various rocket propulsion projects, providing necessary services

in a safe and effective way. He is recognized as a coach, manager, and leader whose work has consistently exceeded all requirements.

Seven Stennis Employees recieved NASA's Exceptional Service Medal. This medal is awarded to government employees for sustained performance that embodies multiple contributions to NASA projects, programs, or initiatives.

Monica M. Allison-Ceruti received the NASA Exceptional Service Medal for a career of more than 36 years, including



the last nine as Chief Counsel in the Stennis Office of the Chief Counsel. In that role, she has developed a diverse, talented staff that offers professional, candid, independent counsel through a broad range of legal capabilities. She has provided a consistency and continuity in NASA's dealings and has contributed to the success of Stennis' propulsion testing missions. Ceruti is recognized as the embodiment of servant leadership, encouraging and enabling her team in development and achievement.

Melissa P. Ferguson received the NASA Exceptional Service Medal for her role as the Stennis energy manager



and for leading the center in meeting agency energy and water intensity reduction goals. Ferguson has played a major role in several projects that aim to reduce energy consumption at high-intensity facilities and has led in installing digital energy and natural gas consumption meters on site to improve real-time monitoring

of energy usage. Her dedication and passion towards her role have allowed her to become a distinguished contributor to the safety and mission assurance of several projects during her 23 years of work on site.

Michael B. Holmes received the NASA Exceptional Service Medal for leadership as the A-1 Test Stand facility manager and for



his contributions to the ongoing RS-25 single-engine test project. Under his leadership, more than 90 projects have been completed on the A-1 stand to ensure its readiness for future testing. Holmes is a champion of facility maintenance and modernization projects, helping to improve the viability and performance of the test. His work has been instrumental to both the past and present success of Stennis and NASA.

Kerry D. Klein received the NASA Exceptional Service Medal for operational and technical leadership in the Stennis Engineer-



ing and Test Directorate, contributing substantially to the success of the site's rocket propulsion test mission. As a test support contractor, Klein handled the day-to-day operations of the Data Acquisitions and Controls. After joining the NASA team, he led the completion of several high-profile test projects and was deeply involved in the resolution of every major technical issue facing the center during his tenue, helping to ensure the mission success of NASA.

Vincent R. Pachel received the NASA Exceptional Service Medal for his contributions to the Engineering and Test Directorate as the

AWARDSContinued from Page 11

senior member of the Stennis Test Operations Division, spanning almost three decades. Throughout his career, Pachel has



performed a variety of complex and diverse activities, including leading the successful effort to reactivate the mobile Engine Vertical Installer in support of the Artemis core stage Green Run test project. Pachel has carried his dedication and commitment to work into his personal life, volunteering his time to help individuals affected by Hurricane Maria in 2017.

Michael J. Rewis received the NASA Exceptional Service Medal for his positive impact on the institutional and industrial safety programs



as an aerospace technologist for over 29 years. In addition to other roles, Rewis authored the original Construction Safety and Health Program policy for Stennis and served as the driving force for development of the site's Occupational Safety and Health Administration 30-hour training module. His commitment to safety and mission assurance has had a positive and lasting impact at Stennis and has been instrumental in the ongoing success of the center.

David E. Roberts received the NASA Exceptional Service Medal for his contributions as a lead mechanical test operations



engineer, test director, and project manager, displaying technical and project skills to enable the success of various NASA and commercial propulsion test efforts at Stennis. Since 2000, Roberts has served in various roles and has ensured the completion of several formulation, design, procurement, and construction activities. Roberts is recognized across the agency and beyond as a subject matter expert in test operations.

Christina P.
Zeringue received the NASA
Exceptional
Service Medal
for her leadership
and implementation of numerous



safety and mission assurance process improvements. As manager of the Stennis Material Review Board, Zeringue has overseen a number of decisions and mitigations to support operations at all test complex and support facilities. Zeringue is a resource for professional, organizational, and technical knowledge who is recognized as mentor and who has significantly improved the achievement of the safety and mission assurance mission at Stennis.

Five Stennis employees recieved NASA's Exceptional Public Service Medal. This Medal is awarded to individuals who are not government employees but have made exceptional contributions to the mission of NASA.

William S.
Burks received
the NASA Exceptional Public
Service Medal
for long and
sustained performance during



his 35-year career of managing the wellness programs for NASA and the entire Stennis community. As the founding member of the wellness center, Burks has successfully led it to meet the needs of the everchanging Stennis workforce, organizing various wellness programs and events to promote health and wellbeing. His dedication to the needs of the fitness-seeking people he serves has made a lasting and life-altering

impact on not only the workforce but also the mission of Stennis Space Center.

Billy S. Davis received the NASA Exceptional Public Service Medal for the outstanding leadership and commitment he has shown in



support of Stennis propulsion test activities for over 30 years. As assistant operation manager of the Stennis Cryogenic Storage Facility and High Pressure Gas Facility, Davis has provided invaluable service to various test projects, including the Green Run testing of NASA's Space Launch System core stage.

Throughout his career, Davis has demonstrated a commitment to excellence, allowing him to perform tasks at the highest level.

Merlon M. Hines received the NASA Exceptional Public Service Medal for his ongoing contract service and support to



Stennis Space Center for more than 38 years. For nearly 14 years, Hines worked diligently with the Stennis Hurricane Katrina Recovery Program, not only developing and verifying 65 highly detailed project books but also completing 32 repair project books, 29 mitigation project books, and four program summary books. His commitment to the work perfectly illustrates NASA's core values of safety, integrity, teamwork, and excellence.

Curtis A. Lockwood received a NASA Exceptional Public Service Medal for more than 35 years of contributions as an electri-



cal engineer, including work to help

AWARDSContinued from Page 12

prepare the B-2 Test Stand to support the Space Launch System core stage Green Run test project. He also was instrumental in helping to increase E Test Complex capabilities, serving as lead electrical technician on numerous projects and helping to ensure the area's lightning protection system met industry safety standards. Lockwood's leadership and commitment to excellence have played a key role in ensuring NASA's mission success.

Robert H. Taylor received the NASA Exceptional Public Service Medal for sustained achievement as the Stennis Branch Operations and Maintenance manager. He has served as an innovation leader for decades, leading the development of processes for the Stennis's Reliability Centered Maintenance program and validating a variety of new technologies to improve maintenance capabilities while reducing costs. Taylor played a key role in recovery efforts following Hurricane Katrina, making him a respected and appreciated member of the Stennis community for over 33 years.

Seven Stennis employees recieved NASA's Exceptional Achievement Medal. This medal is awarded to government employees for a significant specific achievement or substantial improvement in operations, efficency, service, financial savings, science or technology that contributes to the mission of NASA.

Dawn M. Davis received the NASA Exceptional Achievement Medal for her sustained performance and technical



contributions to the Space Launch System core stage Green Run Test Project as the Electrical Engineering Branch chief. Davis and her team of engineering professionals directly impacted the performance of the B-2 Test Stand team during core stage activation and preparation activities. Her ability to identify emerging issues and promptly solve them was instrumental in the success of the SLS core stage Green Run test campaign.

Nicholas J. Nugent received the NASA Exceptional Achievement Medal for leadership and technical contributions as a



Stennis project engineer for both the Space Launch System (SLS) core stage Green Run test project and the Exploration Upper Stage Green Run test project. He has led in addressing various engineering challenges and opportunities associated with the work, most notably involving the B-2 Test Stand environmental conditioning system. Nugent's innovative design and project leadership skills directly contributed to the success of the SLS core stage Green Run test project.

Michael A. Pannell received the NASA Exceptional Achievement Medal for his work as the senior industrial hygienist, provid-



ing Occupational Health Services for Stennis test complex personnel. He revamped work controls and processes for work involving hazardous coatings, and deployed training on multiple work shifts to protect both personnel and the environment. During Space Launch System test preparations, he worked with contractors to safely use restricted hazardous chemicals, making him an integral part in the success of the project.

Adrianne P. Ragan received the NASA Exceptional Achievement Medal for her work and dedication as senior contracting officer in the NASA Office of Procurement, supporting the advancement of NASA's space exploration strategic goals. Ragan served as the contracting officer for the Agency-Wide Master Planning acquisition plan-



ning team, leading in the first agencywide procurement for Stennis and the first center contract awarded with 99 percent of procurement efforts being performed virtually. Ragan's efforts have proven instrumental to success of Stennis and NASA.

Grant M. Tregre received the NASA Exceptional Achievement Medal for success as associate director of the Stennis Safety



and Mission Assurance Directorate, supporting the NASA mission in a variety of roles and utilizing his expertise and experience to improve and standardize processes. Using spaceflight project experience from his time at the Goddard Space Flight Center, Tregre has implemented several site improvements. His consistent and effective leadership and support has significantly contributed to the overall success of the Stennis safety and mission assurance efforts.

Timothy L. White received the NASA Exceptional Achievement Medal for his leadership to NASA Marshall Space Flight



Center and support of Space Launch System core stage work. During an extended detail at Michoud Assembly Facility in New Orleans, White led in various efforts to expedite completion and shipment of the SLS core stage for Green Run testing at Stennis. White worked diligently to support the NASA mission through delivery of the critical fight hardware to Stennis in January

Continued from Page 13

2020. His core stage work and support helped advance the goals of the nation and NASA's Artemis program.

Robert C. Williams received the NASA Exceptional Achievement Medal for his support of B-2 Test Stand design work and



the SLS core stage Green Run test project as a structural analyst in the Stennis Engineering and Test Directorate. Williams led a number of critical design tasks to validate and verify structural requirements for the test project, including one to address a last-minute loads change without a slip in project schedule. Williams' commitment to his work and attention to detail is a true example of the spirit and intent of NASA's core values.

One Stennis employee recieved the NASA's Exceptional Engineering Achievement Medal. This is awarded to both government and non-government individuals for exceptional engineering contributions toward achievement of the NASA mission.

Son K. Le received the NASA Exceptional Engineering Achievement Medal for his numerous roles in executing the Stennis



propulsion test mission as pressure systems manager. During a 26-year career, Le has served as a verified American Petroleum Institute pressure vessel inspector and piping inspector, supporting every propulsion test campaign since 2004, including Space Launch System core stage testing, and maintaining over 300 vessels. Le's technical expertise and focus on improvement has resulted in the Stennis maintaining a world class pressure vessel system.

Six Stennis employees recieved the NASA Early Career Achievement Medal. This Medal is awarded to a government employee for unusual and significant performance during the first 10 years of an individual's early career in support of the agency.

Jasper C. Cook received the NASA Early Career Achievement Medal for significant contributions as lead electrical de-



sign control engineer for the Space Launch System core stage Green Run test project on the B-2 Test Stand. He has provided significant test support as a principal operator for the data support systems, demonstrating a strong ability to identify, analyze, and solve problems quickly. His reputation as a "go-getter" has provided valuable technical support to the Stennis electrical engineering community and mission.

Matthew K. Ladner received the NASA Early Career Achievement Medal his work as the Stennis demolition program manager,



reducing the center's abandoned and underutilized facilities in accordance with the agency goals. Under Ladner's leadership, the Stennis demolition program has been recognized among all center programs, leading the agency in the percentage of demolished facilities. He also has contributed to the restoration of critical center electrical systems. Ladner is recognized for the ability to achieve results and for his commitment to teamwork and mission success.

Justin S. Lucas received the NASA Early Career Achievement Medal for his performance as a project manager



in the Stennis Center Operations Directorate, particularly in his support of the NASA Artemis program and the Stennis Construction of Facility Program. Lucas has performed at a very high level and has been able to apply new technologies in his work on various projects, often resulting in significant cost reductions. The contributions made by Lucas during his early career has made a great impact on the center's major construction projects.

Bridget D. Moody received the NASA Early Career Achievement Medal for her environmental management contributions in



support of Stennis rocket propulsion test and institutional missions. She has established herself as an expert on air emissions, solid waste management, pollution prevention, sustainable acquisition, and the Stennis Environmental Management System. As a result, Moody has established herself as a vital member of the Stennis Environmental and Health Services teams and instrumental to the overall success of the center.

Sheldon L. Murphy received the NASA Early Career Achievement Medal for his service and leadership while serving in



multiple positions in the Stennis Office of Procurement. Since joining NASA in 2018, Murphy has applied his contracting expertise as the site's warranted contracting officer, supporting and advancing the center's mission of space exploration and NASA's strategic goals. Murphy is continuously striving to improve processes and reduce costs, making him a key asset to the ongoing success of Stennis and NASA.

Patricia White received the NASA

See AWARDS, Page 15

AWARDSContinued from Page 14

Early Career Achievement Medal for her support in the advancement of space exploration and NASA's strategic goals as



a contracting specialist in the Stennis Office of Procurement. In addition to her work on propellant contracts, she has provided key support on one of the agencies largest and most complex contracts, the \$1.3B Synergy-Achieving Consolidated Operations and Maintenance (SACOM) Contract. White's contributions have proven essential to the success of Stennis propulsion testing and the Office of Procurement.

Five Stennis employees and two groups received he NASA Silver Achievement Medal. This medal is awarded by NASA center directors to indivduals or teams for a stellar acievement that supports one or more of NASA's core values.

Jeffery A. Askew received the NASA Silver Achievement Medal for achievements as a NASA project manager in the



Stennis Center Operations Directorate. Among other things, Askew provided key support to the successful implementation of the first Utility Energy Service Contract at Stennis, helping the site meet energy-related federal mandates, as well as site goals and objectives. The contract has led to increases in operational efficiencies and cost reductions. Askew's contributions has established him as a notable asset to Stennis.

David J. Carver received the NASA Silver Achievement Medal for key achievements as the lead electrical engineer for the RS-25 engine test project and the Stennis Data Ac-

quisition System expert. Carver demonstrated particular leadership and technical expertise in the development of a center-based



thrust vector control system to conduct gimbal testing of RS-25 engines, used to demonstrate the engines can pivot as needed to guide the Space Launch System in flight. Carver's work was critical to the successful development and implementation of the system on the A-1 Test Stand.

Jill B. Castiglione received the NASA Silver Achievement Medal for her sustained performance as an administrative



assistant in the Stennis Office of Procurement and her support of the agency's implementation of its Vision for Space Exploration and NASA's strategic goals. Castiglione performs a broad range of management, administrative, and clerical function while leading administrative support contractor personnel in meeting mission objectives. Castiglione is characterized as a model employee whose skillset is unrivaled in the areas of expertise.

Jeanne M. Koger received the NASA Silver Achievement Medal for her professionalism, leadership, and achievement as



an attorney advisor for the Stennis Office of the Chief Counsel. In addition, Koger provided critical support to the Stennis Office of Diversity and Equal Opportunity during a pair of separate details, helping the office meet its mission goals and exceed performance expectations. Koger's work in both site offices serves as an example of the agency's core values of teamwork and excellence.

Lauren W. Underwood received the NASA Silver Achievement Medal for her contributions to the Stennis technology develop-



ment program as a member of the Test Technology Branch team in the Engineering and Test Directorate. She has provided notable support in the growth of Stennis' autonomous systems business, leading the development of the NASA Platform for Autonomous Systems, which is contributing to multiple agency missions. Through her efforts, Underwood has helped to transform the autonomous systems capabilities of both Stennis and NASA.

The Operational Readiness of the B-2 Test Stand and Space Launch System (SLS) Core Stage Lift **Team** at Stennis received the NASA Silver Achievement Medal for their dedication in completing all work need to prepare and activate the B-2 Test Stand to accommodate the Space Launch System core stage for Green Run testing. The efforts encompassed all test stand systems and functions. The work culminated with the lifting and installation of the core stage onto the stand, which required careful collaboration by all involved. The work by the Stennis teams exemplified NASA's commitment to the core values of safety, excellence, teamwork, and integrity.

NASA

John Bourgeois
Andrew Bracey
Elizabeth Calantoni
Gregory Carmouche
Thomas Carroll
David Christiani
Andrew Clarke
Belfield Collymore
Jasper Cook
Dawn Davis
Gregg De Felicibus
Armando Delgado
Kimberly Driebergen
Robert Gargiulo

Continued from Page 15

Juan Gomez James Hamilton Mark Hancock Bartt Hebert Phillip Hebert Andrew Henken Stephen Hunter Scott Jensen Allecia Kimble Kerry Klein Kanokwan Kooamphorn Joseph Lacher Brandon Ladner Matthew Ladner Lester Langford Son Le Truc Le Justin Lucas Sarah Maine Aaron Mannion William Miltier Mansour Muhsin Sheldon Murphy Huy Nguyen Raymond Nichols Nicholas Nugent Kevin Oramous Vincent Pachel Adrianne Ragan Robbie Randall Stephen Rawls Joshua Reeves Christopher Riley Ryan Roberts Mark Robinson Jennifer Rolison Debra Rushing Harry Ryan Claude Sanders Kamili Shaw Robert Simmers Robert Smith Peter Tran Mark Turowski Darrel Varner Melissa Wagner Casey Wheeler Patricia White Burnley Wigley Charles Wilder

Support Team

Robert Williams

Elizabeth Andrews Mark Ashley William Averill

Gwendolyn Barrett Kenneth Bean James Bennett James Biles Charles Blackmon Jace Boudreaux Eric Bromwell Stacy Brunson Jon Byrd James Cain Cheley Carpenter Brandon Carver Brandon Clark James Clark Justin Cook **Devin Cousins** Austin Creel Cody Cuevas Samuel Cunningham Joseph Dacosta Ronald Dartez Andrew Davis Billy Davis John Davis William Davis Michael Dedeaux Joseph Diggs Anthony Dilorenzo Jerry Duggan Shelton Dunn Bradley Favre Dennis Finn Anthony Fleming Bryce Fowler Traci Frizzell Wayne Fucich Adam Fulks Kerry Gallagher Philip Geraci Brandon Goss Andrew Graves Lacy Green Richard Grimstead Colin Groom Kenneth Hancock Charles Hariel Scott Hariel Shannon Hariel Lawrence Haselmaier Rocky Henley Ross Hooge Jeret Howard Curtis Hyatt Kurt Jarrell Artie Johnston Tamika Jones Jarrod Joyner

Miran Kapidzic

Philip Kopfinger

Byron Ladner Dustan Ladner Gregory Ladner Lavell Ladner Michael Ladner Terrell Ladner Tony Ladner Wendell Ladner Jeffery Lawson Angela Lee Carl Lee Harlie Lee Robert Lee Joseph Lesieur Joseph Lizana Keith Lizana Curtis Lockwood Hannah Lynch Michael Marodis Peggi Marshall Derek Martin Frankie Martin Kevin Mccaleb Jacob Mckinley Jimmy Miles John Mitchell Thomas Mitchell Nicole Narvaez Douglas Necaise Eugene Necaise Tuan Ngo Chad Nicholas Chad Northrop Carley Odom Kevin Parker Boyd Penton Vince Pham Ty Proffitt Alvin Richard Mark Robinson Travis Rubio Rachael Ryerson Clyde Sellers Raymond Seymour Robert Seymour Michael Sheffield Rodney Shiyou Terri Skinner Billy Smith John Smith Tamatha Smith Therman Smith Ronald Snyder Breanna Spence Joshua Spence **Brennin Spiers** Jared Spiers

Continued from Page 16

Richard Spooner Donald St. Germain Matthew Steed Virgil Steele Paul Stevens Thomas Stockstill Jonathan Strickland Robert Taylor Daniel Truxillo Dale Tutor Mickey Walker Perry Waller Furman Ward Winston Wedgeworth Ryan Weir Jason Wheat Cleveland Whitfield Jonathan Whitfield Rolland Wichterich Leroy Wilson Mark Wittorf

The Software Usage Agreement (SUA) Consolidation Team re-

ceived the NASA Silver Achievement Medal for the leadership, dedication and support exhibited in their work to improve and streamline the agency's policies and practices regarding software usage by others. The team addressed all issues and created a new reporting and analytical tool for evaluating usage requests. The team has gained praise across the agency for its ability to create innovation solutions to longstanding problems. Its work has resulted in cost reducation while improving security, management insight, and customer experience.

NASA

Curtis Armstrong Christopher Copelan Thomas Stanley

Support Team

Karen Hoselle William Hughes John Wolverton

Length of Service Awards

40 years Rena L. Perwien

35 years

Pamela G. Covington
James E. Ryan
Jason F. Edge
Andrew L. Clarke
Kevin P. Power
Monica M. Allison-Ceruti

30 years

Sandra C. Ladner Michael J. Rewis Arlen M. Griffey David R. Keith

Group Achievement Awards

ABEDDR/HCB Test Project Team NASA

Christoffer Barnett-Woods Cory Beckemeyer Aundra Brooks **Jack Conley** Armando Delgado Joshua Greiner Paula Hensarling Melissa Huggins Truc Le Megan Martinez William Mckenzie Thomas Meredith Christopher Mulkey Kevin Oramous Pevton Pinson Kevin Power Robbie Randall Stephen Rawls David Roberts Ianice Tasin Richard Wear Charles Wilde

Support Team

Taylor Adam
Vicki Ard
Charles Blackmon
David Blansett
Van Bolden
Byron Bordelon
Roger Bridges
Brandon Clark
Samuel Clay
Brian Corr
Mark Corr
Jesse Crawford
Sarah Davis
Larry Deschamp
Frederick Dodd

Richard Dudley James Dumas Joni Dumas Iason Evans Brian Everett Jack Fabre Susan Fendley Dan Fillette Anthony Fleming Adam Fulks Paul Fuller Kerry Gallagher Wesley Goodin Patrick Guidry Brianne Guillot Kenneth Hancock Leslie Hanna Josh Hansell Charles Hariel Scott Hariel Mack Hester Darwyn Hilsher Petter Hobgood Nathaniel Huber Anthony Jackson Kurt Jarrell Ricky Jones Tamika Jones Raymond Keim Stephen Koch Jody Ladner Wendell Ladner Carl Lee Rene Lefrere Eric Lichtenstein Joseph Lizana Paul Lusich Michael Marodis Bruce Matthews Jacob Mckinley Matthew Melerine Kristan Miner Kenneth Morgan David Mosbacher Douglas Necaise Chad Northrop Carley Odom Kevin Parker Ralph Penton Kenneth Powe Christopher Quinn Mounir Sabbagh Raymond Seymour Grant Shaw Darrell Smith Robert Smith Therman Smith

Continued from Page 17

Joseph Spence
Joshua Spence
Darrin Steber
Jeffrey Strickland
Bradley Tyree
Terry Wactor
Cleveland Whitfield
Raymond Williams
Anita Wilson
Samuel Wright

Agency Master Plannin Acquisition Buying Team

NASA

Ronald Bald Beth Bradley Steven Gilmore John Green Rodney Harris Amy Langdale Timothy Pierce Adrianne Ragan Jeffrey Renshaw Scott Robinson Rena Schlachter Kim Toufectis

E-2/E-4 Commercial Space Launch Agreement (CSLA) Implementation Team

NASA

Don Beckmeyer Andrew Clarke Karen Davis Bartt Hebert Son Le Charles Liberto Bridget Moody James Moore Adam Murrah Benjamin Powell Stephen Rawls Jeffrey Renshaw Grant Tregre Monica Watts Christina Zeringue

Support Team

Lorna Ammond Robert Hammond

Facility Safety Team Contribution to Voluntary Protection Program (VPP) Star Recertification

NASA

Aundra Brooks Ronald Byrd Elizabeth Calantoni Gregory Carmouche Donna Dubuisson Rachel Harrison-Woodard Gina Ladner Truc Le Milford Olinger Karen Patton Michael Rewis Delton Rodriguez Matthew Scott Robert Simmers Neil Toupin Karen Vander

Support Team

Robert Cales Robert French Keith Fulton Rodney King Latisha Ladner John Lindsay James Mirandy Thomas Mitchell Carmen Ramirez William Ritchie Robert Taylor

NextSTEP-2 Habitation Systems

NASA

Daniel Carrejo Jorge Figueroa Joshua Reeves Adam Schlesinger Lauren Underwood

Support Team

Joshua Banks Paul Escalara Tim Fackler Neal Gross Alishan Hassan Ben Hekman Jeff Morris Jon Morris Casey Nalley Oliver Ortiz Quentin Oswald Jim Pogemiller Brian Rey **Jeff Siders** Bryan Sullivan Mark Walker Michael Walker

SSC Office of Procurement Services Contract Team

Support Team

Delunzo Bartee Angela Cuevas Shellie Hoffmann Richard Marshall Star Mitchell Emily Polk Sara Stuart Candice Talley

Online Resources

Read a Biz New Orleans cover profile profile of Stennis Associate Director Mary Byrd from the May issue at: https://www.bizneworleans.com/power-players-2/

Stennis Emergency Management NASA Coronavirus Response

Stennis Artemis Resources Page Stennis Virtual Tour

Stennis Fact Sheets NASA STEM Toolkit

NASA at Home NASA Image of the Day

NASA engineer finds dream job, work team at Stennis

In his short four years of work at Stennis Space Center, Andrew Henken has already participated in a job that is nothing short of a dream come true for many – Green Run testing of NASA's Space Launch Systems (SLS) core stage.

As an engineer in the Mechanical Test Operations Group, Henken has played a role in supporting daily operations on the B-2 Test Stand, where the core stage was installed and tested. He even had the opportunity to serve as one of the liquid hydrogen transfer engineers during a wet dress rehearsal test that involved loading the stage with more than

733,000 gallons of liquid oxygen and liquid hydrogen for the very first time.

Henken served in the same role for the final SLS Green Run hot fire test, which fired the stage's four RS-25 engines at the same time, just as during an actual launch. The hot fire generated a combined 1.6 million pounds of thrust and represented the most powerful test conducted at Stennis in more than 40 years.

A native of California, Henken's love for rocket testing started at a young age. As a child, he would often go into a field with his friend and launch a model rocket. "I remember the sound it made as it disappeared into the sky and just standing there in awe," recalled Henken, now a resident of Henleyfield, Mississippi. Later, he carried the tradition into his own family, sharing his love for model rockets with his own son.

A california native, NASA engineer Andrew Henken has found himself part of historic work and a great team of colleagues at Stennis Space Center. Most recently, he was part of the team that helped complete Green Run testing of the first core stage for NASA's Space Launch System rocket on the B-2 Test Stand.

Despite a lifelong fascination with rockets and space, Henken did not naturally turn to Stennis, the nation's largest propulsion test site, during his job hunt. In fact, he was completely unaware of Stennis until he came across an online posting for a job at the center. It sounded like a perfect position, so Henken applied and was ultimately accepted. "It is literally a once-in-a-lifetime opportunity, and I am very lucky I got to be a part of it," Henken acknowledged.

His time on site, however, was initially daunting, particularly on a project as large as Green Run, which involved a systematic testing of the SLS core stage and its integrated systems. With multiple moving parts and processes, it can be difficult to keep pace and perfect the challenge of timing.

However, with the help of his fellow team members, consisting of NASA, Syncom Space Services, and Boeing personnel, Henken quickly grasped the understanding of how to run things smoothly and efficiently. When asked to identify his favorite part of working at Stennis Space Center, Henken points to the team. "I have never worked with a better group of people, and you get to experience and work on things that nobody else on the planet can," he said.

As part of such a team, Henken was able accomplish his proudest work yet during his time

at Stennis – the first successful full duration hot fire test of the SLS core stage. The test of more than 8 minutes was a critical milestone for SLS, a heavy-lift launch vehicle being built as the backbone for human exploration beyond Earth's orbit. SLS is designed to power Artemis program missions to return humans, including the first woman and the first person of color, to the Moon to establish a longer, sustainable presence and to prepare for eventual missions to Mars. The core stage tested at Stennis now has been transported to Kennedy Space Center in Florida where it is being prepared to launch the uncrewed Artemis 1 mission around the Moon.

As a result of their SLS work, Henken and his fellow team members were awarded the NASA Silver Achievement Medal for outstanding performance. The award citation noted their operational readiness activities on the B-2 Test

Stand and their support of the critical lift and installation of the SLS core stage onto the stand. The award is given to those whose work is deemed extraordinary or important to the overall NASA mission.

In the future, Henken hopes to continue helping NASA reach their goals of space exploration, which includes testing of NASA's new Exploration Upper Stage (EUS) at Stennis once it is completed. EUS is being built as a large second stage for future flights of the SLS rocket. Prior to its launch, it also will undergo systems testing on the B-2 Test Stand at Stennis. "I am excited to test EUS and see SLS start flying and sending people into space and, hopefully one day, to Mars."

Stennis News

A²Research receives NASA recognition

NASA recently announced its 2020 Small Business Industry Awards recipients. These included A²Research Joint Venture, which received the center-level Small Business Prime Contractor Award for Stennis Space Center. The recognition is awarded to companies who perform well on their center contracts, works cooperatively, and provides innovative solutions to problems and issues that arise. A²Research is the laboratory services contractor at Stennis.

Firehawk begins Stennis partnership

Stennis Space Center has signed a new Space Act Agreement with Firehawk Aerospace for the company to test its new hybrid rocket engine at the south Mississippi site.

As part of the agreement, the company will occupy space in an existing building within the Stennis Space Center test complex. The company plans to use a mobile platform to conduct a six-month test campaign of its innovative engine.

Firehawk is focused on using 3D-printing techniques to manufacture custom-designed, hybrid-fuel rocket engines. The rockets use a new kind of hybrid fuel developed by the company to be both safe and cost-efficient. Firehawk is seeking to work with both commercial and defense markets to produce custom-designed rockets in just four to six months time.

Hybrid rockets use a combination of solid fuel and a liquid oxidizer, a concept that dates back to the 1930s.

NASA recognizes Stennis HErO



To mark progress in NASA's Artemis program that will return humans, including the first woman and person of color, to the Moon, the space agency's Human Exploration and Operations (HEO) Mission Directorate has been recognizing HErOes performing necessary and critical work. Overall, 16 Stennis Space Center employees have

been cited by the NASA directorate for Artemis-related efforts. The latest to be recognized is Pablo Gomez, a member of the Stennis Electrical Operations Branch team. Gomez was cited April 30 as one of the unquestioned leaders in the design and implementation of the instrumentation systems responsible for gathering critical test data during the Green Run hot fire test and for efforts to ensure the B-2 Test Stand was safe for both person-nel and the Space Launch System core stage.





NFINITY Science Center, the official visitors center for NASA's Stennis Space Center, has announced plans to reopen to the public with a special Sci-Fi Saturday event May 29.

The center has been closed for much of the past year due to the COVID-19 pandemic and related restrictions. Following the May 29 grand reopening event, the facility will resume normal operating hours, beginning June 3.

Hours of operation will be Thursday through Sunday, 10 a.m. to 6 p.m.

The center also has announced plans for upcoming events, including STEM (science, technology, engineering, and mathematics) events and several camps in June and July. For information about activities, persons may visit www.visitinfinity.com.

INFINITY Science Center features 72,000 square feet of exhibits and activities, allowing guests to explore Earth and space through artifacts, tours, memorable experiences, educational programs, and citizen science opportunities.

1970 – a year that defined Stennis Space Center

1970 was a defining year in the history of what is now Stennis Space Center. The Mississippi Gulf Coast was still reeling from the devastating blow of Hurricane Camille, the Apollo Program was ending, and NASA budgets were being cut.

The workforce at the Mississippi Test Facility (MTF) had been cut back to under 2,000 workers. Facility Man-

ager Jackson Balch jumped on the offensive and began working with Sens. John C. Stennis of Mississippi and Allen Ellender of Louisiana, as well as NASA Administrator Thomas Paine and the White House, to determine how to keep MTF viable.

Balch began to talk to other government agencies about locating to the facility, including the Earth Resources Observation Systems Program, the U.S. Navy, the U.S. Coast Guard, and the Bureau of Commercial Fisheries. How-

ever, communications were confused, and agencies were being contacted multiple times by different people from MTF, Marshall Space Flight Center (MSFC) and NASA Headquarters, harming the chance for commitment from the agencies.

On February 3, 1970, just less than six months after Hurricane Camille hit the Mississippi Gulf Coast, NASA Deputy Administrator, George Low, made a statement while visiting MSFC that MTF "would be reduced to a caretaker status, employing no more than 150-200 persons." If realized, the prediction meant 1,800 people could be laid off from MTF.

In the midst of the possibility of serious cutbacks at MTF, Apollo 13 launched successfully from Cape Canav-eral, Florida, on April 11, 1970, with one of the Missis-sippi Gulf Coast's own on board, Fred Haise of Biloxi, Mississippi. Haise, James Lovell, Jr., and John

Swigert



The primary Apollo 11 crew consisted of U.S. Navy Captain James A. Lovell, Jr. (I to r) as commander, U.S. Navy Lt. Com. Thomas K. Mattingly II as the command module pilot, and civilian Fred W. Haise, Jr. as lunar module pilot.

were on their way to the moon for the third lunar landing attempt. However, just two days into the mission, oxygen tank No. 2 blew up, causing tank No. 1 to also fail.

The command module had no electricity or water, and the crew was 200,000 miles from Earth. News agencies flocked to the homes of the astronauts to get family reactions, which included the home of Haise's family in Biloxi. MTF dispatched a representative to the home of Haise's mother to help the family by

fielding all questions and phone calls from April 14-17.

Due to NASA ingenuity and quick thinking, the Apollo 13 crew was safely returned home, and Biloxi celebrated the return of Haise with a celebration on May 30, 1970.

The Mississippi Test Facility managed many successes that year and the following one, including securing the engine testing assignment for the Space Shuttle Program and having many non-NASA agencies locate offices to the facility.

Hail & Farewell

Office of Diversity and Equal Opportunity

Help combat anti-Asian/Pacific American bias

In 1978, a joint congressional resolution established Asian/Pacific American Heritage Week. The first 10 days of May were chosen to coincide with two important milestones in Asian/Pacific American history: the arrival of the first Japanese immigrants to the United States on May 7, 1843, and the contributions of Chinese workers to the building of the transcontinental railroad, completed on May 10, 1869. In 1992, Congress expanded the observance to a monthlong celebration known as Asian American and Pacific Islander Heritage Month.

In 2019, the estimated Asian population in the United States numbered Chinese at 5.2 million (excluding Taiwanese), followed by Asian Indians (4.6 million), Filipinos (4.2 million), Vietnamese (2.2 million), Koreans (1.9 million), and Japanese (1.5 million). There also were 1.6 million Native Hawaiian residents im the U.S. in 2019, as well as communities of Samoans (204,640) and Guamanians or Chamorros (160,773).

The contributions of Americans of Asian and Pacific Islander descent are firmly woven into the diverse fabric of the nation. Asian American and Pacific Islander (AAPI) Heritage Month is designed to recognize and celebrate the accomplishments of these Americans who have enriched the country and helped define its history.

As COVID-19 cases increase in 2020, anxiety about the disease was partly based on something other than health concerns. From denigrating social media memes and GIFs, to incidents of outright prejudice worldwide, many Chinese people, and people of Asian descent perceived to be Chinese, were being avoided and blamed for spreading the virus that was first documented in Wuhan, China.

Anti-Asian xenophobia has a history rooted in decades of discriminatory and biased American public health and immigration policies targeting immigrants from Asia. Because of the COVID-19 virus, there is concern among AAPI of the threat of physical violence. Hate crimes against the elderly are among the highest. In one instance, on January 28, 2021, 84-year-old Vicha Ratanapakdee was brutally shoved to the ground while taking his morning walk in San Francisco; he died two days later. From March 19, 2020, to February 28, 2021, a total of 3,795 hate incidents directed towards AAPI were reported.

According to Russell Jeung, co-founder of Stop AAPI Hate and a professor of Asian American Studies at San Francisco State University, incendiary comments, such as the term "Chinese virus," on social media directed violence toward those of AAPI heritage. "It gives people license to attack us," he said. "The current spate of attacks on our elderly is part of how that rhetoric has impacted the broader population."

Many suggest racial violence against Asian Americans often goes overlooked because of persistent stereotypes about the community. "There is a stereotype and an assumption that Asian Americans have class privilege, that they have high socioeconomic status and education, and that any discrimination doesn't really happen or feel legitimate," said Bianca Mabute-Louie, a racial justice educator. "There are these assumptions about ways that Asian Americans have 'succeeded' in this country."

Education and efforts to overcome these assumptions are needed, including restorative justice models that break the cycle of violence, ethnic studies to teach people about racial solidarity, and community mediation efforts to help hold people accountable and also resolve issues.

On April 22, 2021, the U.S. Senate approved a bill that aims to curb hate crimes targeting Asian Americans during the coronavirus pandemic. The legislation would instruct the Justice Department to expedite the review of hate crimes related to COVID-19. It also would give state and local law enforcement more resources to track incidents and send guidance on how to root out discriminatory language used to describe the pandemic.

Everyone can be involved in helping to prevent hate and violence directed toward AAPI. It is important to speak out when hate is encountered firsthand. The number of hate crimes that are reported each year is predicted to be underreported, out of fear. Individuals are urged to educate family and friends; to listen to the voices of AAPI, and value their experiences and bravery for speaking out; to support Asian businesses; and to educate themselves about AAPI discrimination and experiences.

Information in this article came from: Berkeley News, UNESCO, CCATE.