

THE FUTURE OF DIVING



INTRODUCING NEW SEGMENT WITH A LOOK INTO THE PAST!

NSWC Panama City Division Ensuring Warfighting Dominance in the Littoral Battlespace



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The Coastal Compass is published bimonthly by the Naval Surface Warfare Center Panama City Division (NSWC PCD) and is an authorized medium for news of general interest about employees of NSWC PCD and their work.

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VIEW FROM THE

Dr. Peter Adair, SES Technical Director

It is with great pleasure that I look forward to serving our command, our Navy, and nation with you at Naval Surface Warfare Center Panama City Division (NSWC PCD) again this year. As we continually strive to be recognized as a model organization, it is encouraging to see the increase of interest and talent we are attracting in our mission areas.

We have already begun 2023 with a bang! In the past few months, we hosted several distinguished guests who witnessed NSWC PCD's technical expertise in research, development, test, and evaluation firsthand.

We proudly welcomed Brig. Gen. Marcus Annibale, Director Expeditionary Warfare (OPNAV N95), USMC, who received in depth briefs and static hardware demonstrations for an up-close perspective of how our mission directly supports the warfighter.

We welcomed Rear Adm. Wesley McCall, Navy Region Southeast Commander, for a visit to our Navy Lab and he met with NSWC PCD Commanding Officer Capt. David Back to learn about the vital strides we are making in expeditionary and maritime systems.

We also hosted Director, Undersea Warfare (OPNAV N97's) and the Naval Sea Systems Command (NAVSEA) Warfare Centers Leadership Team and Head Quarters Staff in February.

And the pace isn't slowing down as we continue to plan for an extraordinary influx of high level visits and warfare center leadership team meetings.

Switching gears from people to facilities, we are excited for the construction to begin on the new Littoral Innovation and Prototyping As we continually strive to be recognized as a model organization, it is encouraging to see the increase of interest and talent we are attracting in our mission areas.

Center. This center will improve NSWC PCD's long-term ability to meet national defense needs by providing areas for collaborative science and technology research and rapid prototyping in multiple technical domains.

The \$58.5 million firm-fixed-price task order, under a multiple award construction contract, will provide us a 54,475 square-foot laboratory, and support space capable of housing workspace and laboratories for engineers and scientists.

The facility, which is expected to be completed early 2026, will consolidate geographically dispersed buildings to increase inter-program research interaction and reduce maintenance and repair costs.

I am also pleased to announce the new NSWC PCD Lab Showcase event series we launched this year. Our Airborne Mine Countermeasures (AMCM) In-Service Engineering Agent (ISEA) was honored to host our first ever laboratory open house showcase. At the end of February, the Landing Craft, Air Cushion Ship to Shore Connector team hosted tours of the craft and systems integration facility.

There are many amazing missions at NSWC PCD and I look forward to future Lab Showcase events where we share the various projects our teams undertake, and feature what they do, and why it matters to the warfighter.

As you can see, we are off and running with much more in store. Thank you for all you do in support of our strategic goals and priorities. Our mission does not happen without each and every one of you and your contributions. Happy 2023 and cheers to a great year!

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CIVILIAN LENGTH OF SERVICE JANUARY/FEBRUARY 2023

Name	Years	Name
Carmen Ferrer	40	Carey Martin
Richard Jermyn, Jr.	40	Eilene Mitchell
John Holloway, Jr.	40	Matthew Naughton
Donald Lancaster	40	Edward Shippey
John Bono	35	Terry Walters
Pamela Stampnick	35	Jason Wilson
William Allers	30	Eric Kosmoski
Keith Hartless	30	Michael Monroe
Carla Stanton	30	Olivia Farr
James Freed	25	Nicholas Hobbs
Charles Holmes	25	Tyler Hoover
Anthony Powers	25	Derek Lovingood
Matthew Chastain	20	Justin Oyler
David Van Dellen	20	Timothy Pham
Julia Gazagnaire	20	Harryel Philippeaux
Richard Manley	20	Kevin Powell
Twonette Marshall	20	Devin Ramsey
Melissa Rix	20	Jamaal Stanley
Glenn Sulzberger	20	Rojae Wright
Jenetta Langston	15	





Defense Acquisition Workforce Improvement Act

Congratulations to our employees for completing their DAWIA requirements this period!

Alan Bounds

Kevin Daniels Christopher Howell Lauren Jarlenski Jonathan Kowalczik Zachary Luther



Name	Code	Name	Code	Name	Code
Kaitlin Summerville	024	Mary Brannon	E12	Grayson Freer	X13
Jesse Aucoin	A34	Lora Farley	E11	Tyrese Harris	X13
Jonathan Grievson	A22	Jacqueline Jermyn	E26	Ivan Hvojnik	X14
Vincent Larsen	A13	Jeffrey Kildow	E15	Akash Patel	X22
Kylie Rathbun	A41	Madison Penney	E31	Quetzal Soto	X15
Nathan Repucci	A11	Maxwell Cobar	X11	Jack Weiler	X22

Dr. Michael Rosenthal Scientist

Division X20 Unmanned Systems, Automation & Processing Division

Code X23 Advanced Signal Processing & Automated Target Recognition (ATR)



What do you do in your job? What is the impact?

I provide technical leadership to a wide range of teams and individuals with different technical backgrounds. I lead the hall robot group, which is workforce development project aimed to internally foster agile technical expertise in the topic of robotics. This group is tasked to learn ROS2 [robot operating system's latest version], Agile DevOps [software and IT operations], and to deploy real robots to roam the halls, while avoiding obstacles and people. I also provide research guidance and collaborate on various basic research topics with academia. I interact with stakeholders, sponsors, tacticians, and warfighters to understand the fleet's situational reality and then translate insights from those interactions into reasonable mathematical assumptions. I collaborate internally with A Department tacticians to support validation efforts, and providing appropriate documentation, and determine interesting and useful future science and technology developments.

Primarily, I update metrics from old Naval mine warfare doctrine to use new information and improve the decision quality. Many of these mine warfare measurements were made over 30 year ago, and a lot has changed in terms of computing power since then. I build upon these time tested mathematical concepts by applying statistical spatial point process theory in order to extend them to more accurately represent the situational reality that our fleet is facing. This effort yields a modern and more general framework of analysis for mine countermeasures and minefield planning that simultaneously complies with the legacy doctrine theory while optionally utilizing new spatial information that was previously not utilized.

My work also requires rigorous documentation, which includes detailed technical papers, algorithm descriptions, and reviews. I present numerous summaries for basic research topics and demonstrations for stakeholders and develop portable applications and software libraries using various programming languages. I also support and maintain developmental transition pathways in order to rapidly deliver novel science and technology algorithms directly into fleeted software products to support ensuring warfighting dominance in mine warfare.

Why did you decide to work at NSWC PCD?

I could see that there was a purpose with merit, because all the work at NSWC PCD comes with opportunities to help the people who protect our country and keep us free. Also, the employer had a plan that would specifically utilize the mathematical and statistical skills that I learned in graduate school. The people that I met during the interview process were all applying their unique skill sets in many productive and meaningful ways. I believed that I would also have the opportunity to grow my skills and apply them in many productive and meaningful ways. The organization was also reasonably competitive. I decided to work for this Navy Lab, because I recognized it as a model organization.

How long have you worked at NSWC PCD?

I started working here right after graduating from Florida State University in 2014, so this September will be nine years.

DIVISION SPOTLIGHT CONT

What does your Division do?

The Unmanned Systems, Automation, & Processing Division supports ensuring warfighting dominance in the littoral battlespace by conducting basic research across multiple aspects of deploying and using unmanned systems for the Navy. This includes developing generalized algorithms for planning the deployment of various assets, embedded processing to actively inform better real time mission execution, and post-mission processing.

This division fosters a culture of collaboration both internally and externally. One way that X20 supports NSWC PCD as a model organization is by carefully stewarding resources awarded through its project proposals. X20 cultivates undisputed technical expertise throughout the littoral battlespace by recruiting, retaining, and mentoring a diverse and talented workforce. Some examples of this expertise includes the generation of synthetic sonar data, auto-mated target recognition, machine learning, robotics, unmanned mission planning, and integrated minefield planning.

What does your Branch do?

The Advanced Signal Processing & Automated Target Recognition (ATR) branch does basic research on processing signals from sensor data and automated target recognition for various Navy applications. A portion of this signal processing deals with training ATR from post processed sonar images. One important goal is to automate and assist end users in minehunting efforts. Another important goal is to translate automated contact data into meaningful measures of effectiveness to aid in evaluating remaining risk and planning additional mine countermeasures effort. Mine countermeasures is closely related to minefield planning and also closely relates to the more general topic of deploying stationary and mobile sensor network systems.

NSWC PCD BLACK HISTORY MONTH SOUNDINGS SPOTLIGHT: *ROJAE WRIGHT*

By Jeremy Roman, NSWC PCD Public Affairs

Rojae Wright, scientist at Naval Surface Warfare Center Panama City Division (NSWC PCD), plays an important part to the various missions of this Navy Lab. His main responsibility is to conduct research, testing, and analysis of non-lethal interdiction materials and technologies. He also volunteered to serve as the NSWC PCD Black/African American Special Emphasis Program (BAA SEP) lead, which aims to function as a conduit between the Black or African American workforce and the Equal Employment Opportunity and Diversity & Inclusion (ED&I) Department.

"In my roles, I actively support strategies designed to promote equal opportunity in the Naval Sea Systems Command workforce by organizing and coordinating BAA SEP meetings and relevant activities, including special observances and educational events," said Wright. "I am motivated to deliver a high level of professionalism and apply my knowledge and expertise to projects that provide a technological advantage to the fleet and warfighter."

Wright, who was born and raised in Jamaica in a small community called Duckenfield in the Parish of St. Thomas, has always wanted to help people and discovered his calling through the help of a friend. "I began university with the intention of becoming a medical doctor, but I was introduced to a physics professor in my freshman year that completely altered my educational trajectory," said Wright. "I developed a passion for research and problem solving which propelled me to complete both my Bachelor and Master of Science in Physics from Alabama A&M University. Shortly after graduating, I began my career at NSWC PCD."

Having served here for the past five years, Wright explained what has had the greatest impact on him so far.

"The people that I've met and the experiences that we've created are what I enjoy the most about being here," said Wright. "I truly value my NSWC PCD community of mentors [both career and personal], coworkers, and lifelong friends."

Along with his efforts to support the warfighter and his fellow personnel, Wright shared what has helped make him successful.

"The words that have helped me throughout my career are 'Learning is a lifelong process.' With this mindset, the fear of failure is minimized and failure is viewed as a learning phase before success. These words allow me to remain curious, embrace new challenges, and seize opportunities that are presented," Wright said. "I have a great deal to learn in my career and life in general, but I am extremely excited to experience what's to come."



With a new year comes a new look and a new segment in the Coastal Compass: The Historian's Corner. The goal is to highlight historical events, accomplishments and milestones to educate the workforce about the history of the command. Explore NSWC PCD's past and familiarize yourself with "what was" to understand the relevance of your role today.

Send comments to NSWC PCD Command Historian: Shauna Love-vonKnoblauch at shauna.r.love-vonknoblauch.civ@us.navy.mil

New Thermal Garment for Divers Tested

By Shauna Love-vonKnoblauch, NSWC PCD Public Affairs

In 1974, a new thermal outer garment offering better protection for the Navy diver in cold water, was successfully tested at the lab, formerly known as Naval Coastal Systems Laboratory (NCSL). This excerpt is from the Underseer, the newspaper at the time.

A new thermal outer garment that offers better protection for the Navy diver in cold water has been successfully tested at NCSL. The tests loom as a significant step forward in the Navy's search for a complete thermal protection system for the diver.

Begun three years ago here at NCSL with engineer Bill McCrory, of Diving and Salvage Department, as task leader, the purpose of the task was to find a technique to maintain a diver in extremely cold water—near freezing temperature of 32degrees Fahrenheit—for extended periods up to eight hours.

According to McCrory, trapped air provides insulation of clothing worn by man in a gaseous atmosphere. Once in the water, the trapped air is lost from the unclothed diver's bare skin. Since 32-degree Fahrenheit water has a thermal conductivity 24 times more than air at the same temperature, the immersed diver will lose body heat 24 times faster in $32^{\circ}F$ water than in $32^{\circ}F$ air. Thus, the thermal insulation of the diver's garments must be much more effective than the best available for use in his normal gaseous environment; i.e., in air.

The just-completed thermal protection garment is heated by an internal tube suit of conventional design through which warm water is circulated. The garment is inflated to provide an insulating gas layer.

Jim Middleton, mechanical engineer in the Engineering Division and a member of McCory's task team, was the test subject suited with the garment and was completely comfortable for eight hours in water nominally 34°F. The garment proved the concept that a diver can be sustained with supplemental heat under extreme conditions with a uniform insulation air gap between his body and the cold water. Previous thermal garments have required from 70,000 to 10,000 BTUs of heat per hour. The test just completed indicates the new equipment may require less than 2000 BTUs per hour. Being developed concurrently at the Naval Civil Engineering Laboratory is a diver-carried heater to be

used with the suit. Interface of the thermal protection garment and the diver-carried heater is projected for March 1975. This will make the system completely self-contained. A collection urine device originally designed for use in the Apollo pressure suits is used with the system.

DIVER PROTECTION IN COLD WATER - Outfitted in the NCSLdeveloped thermal protection outer garment, Jim Middleton, of Code 710, prepares to enter the 34-degree water where he remained submerged for eight hours in comfort. Frank Wattenbarger (*left*) and Cliff Reeder check out apparatus. The ping pong-like balls on the water's surface form a thermal blanket. (U.S. Navy photo) The team of Charlie Noble, Cliff Reeder, and Guy Morgan, of the Diving and Salvage Department, have developed the test apparatus over the past three years. Frank Wattenbarger, also of the Diving and Salvage Department, directed the thermal tests, which were conducted in the Hydrospace Lab cold water tank. The test was monitored throughout by Captain George F. Bond, Special Assistant for Diving Medicine.

Further test dives will be made by McCrory, Middleton, and NCSL Navy Divers Sam Hayslip, EN1, and Gordon McCormack, 0S2, with Louis Kucinski, BMCM, as diving supervisor.



NSWC PCD PERSONNEL SECURITY (PERSEC) BULLETIN



For more information, email: nswcpc_security@navy.mil

ADJUDICATIVE GUIDELINES

The Personnel Security adjudicative process is a determination that an individual is an acceptable security risk for access to classified information. The 13 Adjudicative Guidelines, A – M, of Security Executive Agent Directive 4 (SEAD 4) - National Security Adjudicative Guidelines, provide the concerns and conditions that are evaluated.

GUIDELINE M – USE OF INFORMATION TECHNOLOGY

Concern:

Failure to comply with rules, procedures, guidelines, or regulations pertaining to information technology systems may raise security concerns about an individual's reliability and trustworthiness. calling into question the willingness or ability to properly protect sensitive systems, networks, and information.

Examples of Conditions to be Evaluated

Information technology includes any computer-based, mobile, or wireless device used to create, store, access, process, manipulate, protect, or move information. This includes any component, whether integrated into a larger system or not, such as hardware, software, or firmware, used to enable or facilitate these operations;

- · Unauthorized entry into any information technology system
- · Unauthorized modification, destruction, or manipulation to any information
- Use of any information technology system to gain unauthorized access to another system or compartmented area
- · Downloading, storing, or transmitting classified, sensitive, proprietary, or other protected information on or to unauthorized sources
- · Unauthorized use of any information technology system
- Introduction, removal, or duplication of hardware, firmware, software, or media to or from any information technology system when prohibited by rules, procedures, guidelines, or regulations, or when otherwise not authorized
- Negligence or lax security practices in handling information technology that persists despite counseling
- Any misuse of information technology, whether deliberate or negligent, that results in damage to national security

AWARD NEWS



Dennis Russell

Vaughn Lasater

Upcoming Hwards

31 MAR SOCIETY OF WOMEN INDIVIDUAL AWARDS NAVY CIVILIAN SERVICE INDIANA UNIVERSITY DISTINGUISHED ALUMNI COMMENDATION MEDAL SERVICE AWARD NATIONAL SAFETY COUNCIL RISING STARS OF SAFETY NAVY CIVILIAN SERVICE NATIONAL SAFETY COUNCIL DISTINGUISHED Meritorious Award Service to Safety Award NATIONAL SAFETY COUNCIL MARION MARTIN AWARD 1 APR NATIONAL ACADEMY OF ENGINEERING AWARDS 14 Apr **American Indian Science & Engineering** Society Professional Awards 26 MAY NAVAL SUBMARINE LEAGUE DISTINGUISHED CIVILIAN AWARD

Dates provided are due dates for completed package(s) to be received.

Upcoming awards are regularly updated on: https://wiki.navsea. navy.mil/display/ PCD103/Awards

agency award submissions now require approved public re-

Contact Cierra Burch at W_PNMA_NSWCPCD_PAO@navy.mil for nomination requirements, forms, and questions.

NSWC PCD CONTRACTS OFFICER RECEIVES NAVY CIVILIAN SERVICE MEDAL

By Cierra Burch, NSWC PCD Public Affairs

PANAMA CITY, Fla. – Vincent Tomasi, contracting officer at Naval Surface Warfare Center Panama City Division (NSWC PCD), received the Navy Civilian Service Commendation Medal, Dec. 14.

Tomasi, who has been affiliated with the military for nearly 40 years, has provided his contracting expertise to NSWC PCD for the last seven years.

"Vince was always willing to make personal sacrifices to go the extra mile to ensure purchase orders were awarded ahead of schedule, follow-up on outstanding deliverables, train new personnel, and the timely obligation of expiring funds," stated NSWC PCD Deputy Chief of Contracts Jenetta Langston. "During his tenure, Vince's actions epitomized excellence and professionalism. He has been a great asset to the command and specifically the contracting office—job well done!"

Capt. David Back, NSWC PCD commanding officer, presented this award surprising Tomasi at the contracting department Christmas luncheon.

"This was a complete surprise. I work with a lot of talented people and to be singled out as a Navy Medal recipient is humbling," said Tomasi.

"I prioritize recognition of exceptional performance at NSWC PCD, because I believe it reinforces a culture of excellence that the workforce enjoys being a part of," says Back. "Recognizing those like Vincent, who accomplish the difficult, behind-the-scenes logistics allows our command to serve the Fleet, and is vital to making our command a model organization."

During his time within the small purchasing branch, Tomasi was responsible for issuing more than 450 contract actions valued at \$27 million. His leadership and business acumen served him well as he often remained in the office to complete tasks for his position, while also obtaining supervisory responsibilities when his supervisor was promoted.

"I will admit that taking on the extra responsibility created longer days than I had anticipated, however, the entire contracting team worked diligently to keep the SAP Office functioning to get the contracts out as quickly as possible," said Tomasi. "Stepping into that role allowed me to learn a great deal about what the supervisor responsibilities entailed, which was very helpful when sharing [information] with the replacement supervisor."

Tomasi kicked off the start of his retirement with parting words of encouragement for those within the field.

"For all acquisition personnel, remember to always keep the warfighter, the taxpayer ,and yourself in mind. Get the warfighter what they need in a timely manner by providing products and services that are cost effective, while following the legal procedures nec-

essary," stated Tomasi. Naval Surface Warfare Center Panama City Division Command Officer, Captain David Back, presents Navy Civilian Service Commendation Medal to Vincent Tomasi, contracts officer. (U.S. Navy photo by Eddie Green) 10 NSWC PCD Coastal Compass

COMMANDER, NAVY REGION SOUTHEAST, VISITS NSWC PCD

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Naval Surface Warfare Center Panama City Division (NSWC PCD) welcomed Rear Adm. Wesley McCall, Navy Region Southeast commander, for a visit on board Naval Support Activity Panama City, Jan. 19. During his visit, he met with NSWC PCD Commanding Officer Capt. David Back and learned about the work we do in expeditionary and maritime systems by visiting the Landing Craft, Air Cushion. (U.S. Navy photos by Eddie Green)

Strengthening st

(center to right) Naval Surface Warfare Center Panama City Division Commanding Officer Capt. David Back and Dedric Dennist, NSWC PCD test engineer, welcome (left) Mr. Jimmy Smith, SES, Dept. of the U.S. Navy, Director of the Office of Small Business Programs, for his visit to the Navy Lab, Jan. 31. While here, Smith shared a brief on strengthening government and private sector partnerships with NSWC PCD personnel in regards to small business. His visit included stops with U.S. Navy Experimental Diving Unit and Landing Craft Air Cushion vehicle. (U.S. Navy photos by Ronnie Newsome)



UNMANNED UNDERWATER VEHICLES REQUIREMENTS GROUP (URG)

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Members from the Unmanned Underwater Vehicles Requirements Group (URG) winter session pause during a Naval Surface Warfare Center Panama City Division tour, Feb. 9. The URG is the first of four yearly meetings with the objective to review fleet operations and requirement needs. This begins the Director, Undersea Warfare's (OPNAV N97) process to assess where additional investments need to be made and begin preparations for Program Objective Memorandum Fiscal Year 2026. (U.S. Navy photo by Anthony Powers)

NAVSEA WARFARE CENTERS UNITE FOR TODAY'S NAVY, TOMORROW'S NAVY, AND THE NEXT AFTER

By Jeremy Roman,, NSWC PCD Public Affairs

PANAMA CITY, Fla. — Naval Sea Systems Command Warfare Center leadership from around the country assembled on the Emerald Coast to continue their mission to serve as the Navy's principal research, development, test and evaluation assessment activity for surface/undersea systems and subsystems, Feb. 22 - 23.

The 10 Division – One Team Enterprise uses these opportunities to combine strategic vision with their respective fields of expertise to provide unique value to the Navy. The aim is to provide a bridge between the technical community and the warfighter using design, development, and field solutions for urgent operational fleet needs.

Traditionally, these meetings occur biannually, however this event was the largest in-person gathering since 2020. Rear Adm. Kevin Byrne, NAVSEA Warfare Centers commander, explained why these meetings are vital to NAVSEA's One Team mindset.

"Although leadership regularly communicates across the Warfare Center Enterprise, it's important for the team to get together in person to engage more deeply on topics that impact the entire One Team. These meetings allow us to engage in strategic planning while also addressing the tactical challenges that lie ahead," said Byrne. "But what's just as important as the formal agenda topics are the informal exchanges and collaborative discussions that happen organically during these meetings."

The nearly 50-member delegation, consisting of warfare center commanding officers, technical directors and headquarters staff leadership, navigated a full schedule covering a myriad of topics and briefs. The visit also included a tour of NSWC PCD's diverse mission sets to include stops at the



Landing Craft Air Cushion hangar, diving and life support special operations and a technology expo featuring 21 different projects from NSWC PCD departments.

"Hosting the Commanding Officers and Technical Directors of all the Warfare Center divisions, as well as RDML Byrne and his staff, gives us an excellent opportunity to showcase the skills, talent, and work being done here at PCD in a face-to-face personal way. It also is an excellent way to stimulate future collaboration, since the COs and TDs will go back to their divisions with a clear idea of the sort of work we do," said Capt. David Back, NSWC PCD commanding officer. "As the smallest of the Warfare Center divisions, it's always a good day when we can 'punch above our weight class' and host large events like this, especially when it is so expertly coordinated and executed. Bravo Zulu to everyone involved!"

NAVSEA's pursuit is to enable maritime superiority for today's Navy, tomorrow's Navy, and the Navy after next by committing to deliver relevant technologies, solutions, and support as the Navy's trusted partner.

Front row (from left): Larry Tarasek, Jeff Koe, CAPT Mike Aiena, Michael Slater, CAPT Brandon Larson, Andrea Perles, Ana Gulian, Ron Vien, Dale Sisson, Brad Jordan, Dr. Peter Adair, Dr. Angie Lewis, RDML Kevin Byrne; Second row (from left): Nigel Thijs, CAPT Tony Holmes, Andy Buckon, CAPT A.P. Breksa, Gene Hackney, Dianne Costlow, CDR Christina Carino, CAPT Richard Ardolino, CAPT Duncan McKay, Dr. David Sanders, CAPT Dana Simon, Jon Legge, Beth Warner, CAPT Chad Hennings, Adam Nave, CAPT Sylvester Brown, CAPT Eric Correll; *Third row (from left)*: CAPT David Back, CAPT Phillip Mlynarski, CAPT Todd Hutchison, Dr. Vic Ricci, CAPT Gordon Hunt, David Grande, Ken Dotson, CAPT Damian Clem, Ashley Johnson, Mark Oesterreich (U.S. Navy photos by Eddie Green)



ONE TEAM, NSWC PCD BRINGS FLEXIBILITY TO THE FUTURE OF DIVING

By Jeremy Roman, NSWC PCD Public Affairs

PANAMA CITY, Fla. – After months of planning, the mission to rapidly deliver solutions to ensure warfighting dominance moved one step closer during the Deep Sea Expeditionary with No Decompression (DSEND) Suit In-Water Concept Demonstration held at the U.S. Navy Experimental Diving Unit (NEDU), Feb. 7 - 8.

The DSEND demo tested the capabilities of a new concept suit aimed to help divers navigate their environment more efficiently. Allie Williams, NSWC PCD Fleet Diving In-Service Engineering Agent, explained some of the highlights from this successful demonstration.

"This test was conducted as a proof of concept demonstrating the DSEND suit's flexibility and maneuverability under the diver's own power," said Williams. "The operator was [also] wearing a Divers Augmented Vision Display (DAVD) system inside the suit to demonstrate the future permanent integration of DAVD, as well."

While performance-capable, the current Atmospheric Diving Suit (ADS) is also heavy, lacks maneuverability and requires relatively large sea craft for deployment. This project aims to innovate the previous ADS on several fronts including improvements to its current rotary joint design. For example, the current ADS does not allow movement in the same direction as natural human joints, which can contribute to diver fatigue. This new suit concept would enhanced a diver's range of motion, without considerable strain or force, while providing the added benefit of allowing the user to swim independent of propulsion systems.

An additional program objective is to develop a swimmable dive suit that maintains atmospheric pressure internal to the suit and can withstand pressures up to 300 feet of seawater (fsw). Further development could enable it to greater depths. "The demo went well and served as a good proof of concept for the project. We received good feedback and it was valuable to have the chance for follow-on testing," said Williams. "This program will provide new capabilities to the warfighter by creating a more flexible and lightweight ADS, compared to the previous more costly and burdensome capabilities."

Not only does this demonstration move the project closer to interoperability capability, it also strengthens partnerships through the organizational collaboration of Naval Sea Systems Command 00C3, Office of Naval Research 342, NSWC PCD, Naval Undersea Warfare Centers Keyport and Newport, Nuytco Research, Mide Technology, Coda Octopus and NEDU. They will continue their respective work to complete their primary objective, which is to develop a suit that will replace the 300 fsw Mixed Gas Diving Systems and eventually go to greater depths.





February 2023 15

A Navy diver tests the capabilities of a new concept suit during the Deep Sea Expeditionary with No Decompression (DSEND) Suit In Water Concept Demonstration held at the U.S. Navy Experimental Diving Unit, Feb. 7 – 8. The concept aimed to innovate the previous Atmospheric Diving Suit by making it more flexible, lightweight, and user friendly. (U.S. Navy photo by Ronnie Newsome)

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STEM OUTREACH



Dr. Damion Dunlap, Naval Surface Warfare Center Panama City Division Science, Technology, Engineering and Mathematics (STEM) outreach coordinator, was on-hand to engage with future scientists and engineers at Paxton School's Out of this World Science Night, Jan. 6. The students participated in various activities including: building aluminum foil boats, flying a mini drone, driving robots and launching rockets, learning to fly with a flight simulator, visiting the International Space Station via virtual reality goggles, viewing the night sky with a telescope, creating galaxy art and more. (Courtesy photos)



LAB SHOWCASE: AIR CUSHION VEHICLE

The team at Air Cushion Vehicle, commonly known as "LCAC," hosted the second Naval Surface Warfare Center Panama City Division Lab Showcase, Feb. 24. The team provided the workforce with the opportunity to learn more about who they are, what they do, and why it matters. Employees were able to learn more about the program and how LCAC supports the Navy. (U.S. Navy photos by Eddie Green)



LAB SHOWCASE: AIRBORNE MINE COUNTERMEASURES

Naval Surface Warfare Center Panama City Division Airborne Mine Countermeasures In-Service Engineering Agent was highlighted in an open-house laboratory showcase, Jan. 20. The team discussed their projects, what they do, and why it matters, while networking with personnel from across our various departments and learning of opportunities to collaborate as one team. (U.S. Navy photos by Anthony Powers)



Christopher Cox, a technician in the AMCM ISEA branch at Naval Surface Warfare Center Panama City Division, explains the role of the AN/ASQ-232 Airborne Mine Neutralization System to fellow NSWC PCD employees during a lab showcase at NSWC PCD, Jan. 20, 2023. This event aims to increase knowledge and understanding of fleeted mine countermeasure systems.





James Faison, a MK-105 project engineer in the AMCM ISEA branch at NSWC PCD, explains the MK-105 MOD 4 Magnetic Minesweeping system to U.S. Army Staff Sgt. Jason Mccord, the Equal Opportunity noncommissioned officer at NSWC PCD, during a lab showcase at NSWC PCD, Jan. 20, 2023. The lab showcase gives employees and service members the opportunity to increase their understanding of mine countermeasure technology and implementation.

DARQ DORMANT ACCOUNT REVIEW QUARTERLY DORMANT ACCOUNT REVIEW

What is DARQ?

The quarterly review of Account with Dormant Balances required by OUSD/FMB.

- After each quarter ends, Office of the Under Secretary of Defense / Financial Management Budget (OUSD/FMB). identifies samples with dormant balances.
- Fund Holders/Testers must review each DARQ Sample with 15 days to verify:
 - Verify if the dormant balance will be expended, provide an expenditure date, and explain why the balance was dormant.
 - Provide Key Supporting Docs (KSDs) for KSD samples
 - Validate all samples within ADVANA
- DARQ improves carryover, accountability, DOD's buying power, stewardship of tax dollars, and integrity of the Commands Financial Statements.

DARQ review periods

QTR	Period Covered	DARQ Review Period	Testers Review & Certifi- cation	DAR Lea/FIAR Review & Certification to Comp- troller	Comptroller Review & Certification to NAVSEA	NAVSEA Certifi- cation to FMB
1	01 Oct – 31 Dec	20 Jan– 20 Mar	10 Feb	17 Feb	22 Feb	10 Mar
2	01 Jan – 31 Mar	20 Apr – 20 Jun	12 May	19 May	24 May	09 Jun
3	01 Apr – 30 Jun	20 Jul – 20 Sep	11 Aug	18 Aug	23 Aug	08 Sep
4	01 Jul – 30 Sep	20 Oct– 20 Dec	10 Nov	17 Nov	22 Nov	08 Dec

What is DAR?

The requirement to daily review and closeout accounts with dormant balances. Should be done in between DARQ Review Cycles.

What is a Dormant Account?

A purchase order (PO) obligation (contract, milstrip, shipping, training, or outgoing funding document) or an Unfilled Customer Order (incoming funding document) where there has been no adjustments, liquidations (invoices), contract modifications, disbursements, or collections in the last 90 days.

Who is responsible for closeout of dormant accounts?

The effective review and closeout of dormant accounts is a collaborative effort that requires that active participation of all stakeholders to include Testers (P-Codes), Accounting, FIAR, Program/Project Managers, Contracting Office, and Logistic Offices.

Why is DAR and DARQ such a big deal?

Millions of dollars are not being expended and unexpended funds results in Budget Cuts, which result in NSWC PCD, the Department of Navy, and the Department of Defense receiving less funds each year.



Cancelled: \$3.3 MIL Not available for any purpose

Expired: \$56.3 MIL Available for liquidations & Adjustments only

Current: \$107.1 MIL Available for new obligations

When are funds expended/liquidated?

Funds are not expended/liquidated until the vendor invoices NSWC PCD for the goods or services that have been provided and DFAS pays the vendor for the provided goods or services that were provided.

Note: Funds are not expended when an accrual is processed by accounting; Accruals will not result in an expenditure/liquidation until the vendor submitted invoice has been paid by DFAS.

The Lifespan of Funding

Current funds

available for

new obligations

Expired funds available for expenditures & adjustments for 5 years Cancelled funds no longer available for any purpose

Obligation	Current for
OM&N	1 year
RDT&E	2 years
WPN & OP	3 years
SCN	5 years



City -

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