

## Vice Admiral Edmund P. Giambastiani, Jr., USN

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The Atlantic Fleet Submarine Force numbers more than 40 submarines and 15,000 highly trained and motivated officer, enlisted, and civilian personnel providing submarine and maritime patrol support to the Atlantic, Arctic, Eastern Pacific and Indian Oceans, and the Mediterranean Sea. COMSUBLANT's principal responsibility is the operation, maintenance, training, and equipping of submarines in support of Fleet and National tasking. Vice Admiral Giambastiani also has duties as principal advisor to NATO on submarine matters as Commander Submarines Allied Command Atlantic, as an operational commander for the U.S. Strategic Command as Commander Task Force 144, and as an operational commander providing theater ASW and special surveillance support as Commander Task Force 84.

Vice Admiral Edmund P. Giambastiani, Jr., a native of Canastota, New York, graduated with leadership distinction from the United States Naval Academy, Class of 1970.

Vice Admiral Giambastiani's sea assignments included USS PUFFER (SSN 652), and USS FRANCIS SCOTT KEY (SSBN 667) (BLUE). While assigned to PUFFER, he was a 1973 winner of the Fleet Commander's Junior Officer Submarine Shiphandling Competition. In May 1982, Vice Admiral Giambastiani assumed command of SUBMARINE NR-1, the Navy's only nuclear powered deep diving ocean engineering and research submarine. From July 1987 to April 1990, he commanded USS RICHARD B. RUSSELL (SSN 687). During this tour, the RUSSELL crew was awarded three consecutive Battle Efficiency "E"s, three Navy Unit Commendations, and two Fleet Commander Silver Anchors for excellence in enlisted retention. In June 1991, he assumed command of Submarine Development Squadron TWELVE. In addition to the seven submarines assigned, the squadron served as the tactical development agent and CNO—designated Warfare Center of Excellence for submarine force doctrine. He also served as a joint task group commander for the largest special warfare exercise involving submarines since WWII. During this tour, the squadron was awarded the Navy Meritorious Unit Commendation for its contributions to joint service, carrier battlegroup, and amphibious tactical development.

Vice Admiral Giambastiani's shore and staff assignments include duties as enlisted program manager on the staff of the Navy Recruiting Command Headquarters, Washington, D.C. From May 1985 to September 1986, he served on the staff of the Assistant Chief of Naval Operations for Undersea Warfare (OP-02). He was further assigned as the first naval officer to be special assistant to the Deputy Director for Intelligence, Central Intelligence Agency. In June 1991, Vice Admiral Giambastiani completed a one-year fellowship on the Chief of Naval Operations' Strategic Studies Group. From June 1993 to August 1994, Vice Admiral Giambastiani served as the first Director of Strategy and Concepts at the newly formed Naval Doctrine Command. He was selected for promotion to flag rank in December 1993. In his first Flag Officer assignment, he served as Deputy Chief of Staff for Resources, Warfare Requirements and Assessments (N8), Commander in Chief, U.S. Pacific Fleet. From February 1996 to May 1998, he served on the staff of the Chief of Naval Operations as the Director, Submarine Warfare Division (N87).

Vice Admiral Giambastiani's decorations include the Distinguished Service Medal with two gold stars. But he is most proud of the seven Battle Efficiency "E"s, five Navy Unit Commendations, and two Navy Meritorious Unit Commendations because they recognize the participation and accomplishments of all crew members.

# Submarine Support of National Objectives— Today and Tomorrow

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VADM Edmund P. Giambastiani, Jr., USN  
*Commander Submarine Force, United States Atlantic Fleet*  
*Commander Submarine Allied Command Atlantic*



Fellow flag officers, submariners, distinguished alumni of DEVGRU 2 and DEVRON 12, friends of the Submarine Force and our Navy, ladies and gentleman. Admiral DeMars—thank you for the kind introduction. I'd like to take just a moment to thank you and your staff on the 50th anniversary committee—and particularly Dr. Bill Browning and the DEVRON staff—for your hard work, foresight, and dedication in making this celebration of the Navy's oldest continuously operating tactical development warfare center of excellence a reality. I'm also particularly pleased and awed to be in the company of so many of my heroes—the men who really made this organization and our Submarine Force what it is today. We are all benefactors of your wisdom and experience.

As a first order of business, rather than just recount the two exciting and jam packed years I spent at the

Development Squadron, I thought it appropriate from my perspective as the senior submarine operational commander to put into context the challenges presented today; and draw parallels as appropriate for the period immediately following World War II—when the DEVRON was formed—and the last 10 years since the fall of the Berlin Wall. Next, I'll follow with an overview of both the unique and the complementary capabilities submarines bring to the warfighting Commanders-in-Chief. Informed by this background, I'll try to outline the capabilities submarines will need in the 21st century to maintain the undersea dominance critical to our nation's security. And finally, I'll try to place this discussion in the context of DEVRON 12's future role in our Submarine Force and our Navy.

First, let me review the enormous changes in Submarine Force structure over the last decade. Our personnel have declined from approximately 68,000 Sailors in 1989 to a total of about 28,000 today. Attack submarines have declined from a high of 97 to 58 today. Ballistic missile submarines have shifted from a mixed force of 36 SSBNs to a two ocean, all Trident Fleet of 18. And submarine tenders have declined from 12 to four today, soon to be reduced to our two forward deployed tenders in Guam and La Maddalena, Italy.

Yet, as the Submarine Force structure has contracted from Cold War levels, the threats to which your Navy's submarines are responding have proliferated. From a single, well understood and formidable threat, we have transitioned to a world of multiple, poorly understood, and unpredictable challenges around the world. Kosovo, Korea, the Persian Gulf, terrorism, international drug cartels—these are some of the national security challenges around the globe to which the United States Navy and its submarines are responding every single day. To do so, the Navy today is a power projection Navy, and submarines operate as power projection forces around the world.

In today's Submarine Force of 58 attack submarines, on any given day about 50 are considered operationally ready. However, factoring in crew training and leave, PERSTEMPO and OPTEMPO limits and required maintenance, we provide about 12 forward deployed submarines to the warfighting CINCs. In a major theater war scenario, we can surge all our operationally ready submarines to defend the nation's interests. But, over the long term, those operations cannot be sustained.

Today, we are already at the limits of the sustainable. We must repeatedly say “no” to important requirements in the interests of long-term sustainability and as a result of the reduction in submarine assets. As examples:

- Last year USS BOISE (SSN 764) was pulled out of a major U.S. Atlantic Command sponsored Allied exercise to meet emergent European Command theater tasking in the Mediterranean, including coverage of Tomahawk strike packages.
- I recently cancelled U.S. submarine participation in the major biannual NATO “Battle Griffin” exercise in the North Atlantic to sortie USS PITTSBURGH to meet submarine tasking in the Central Command theater. PITTSBURGH was the only submarine forward deployed in the Atlantic at the time.
- SUBLANT is meeting the bare minimum CINC requirement for counter drug operations in the Southern Command theater. This is despite the Joint Task Force Commanders praise of submarines as the greatest force multiplier (by a factor of 4) he can bring to bear in his anti-drug campaign.
- I am unable to meet European Command requests for four SSNs in the Mediterranean or for year round Dry Deck Shelter SSN presence for Special Warfare purposes.

As we decommission 20% of the Atlantic Fleet attack submarines in fiscal year 1999 alone, the value of each individual submarine rises substantially. My staff and I are working hard to become ever more efficient in our scheduling and operations. In conjunction with other Navy initiatives directed by the CNO and our Fleet commanders, deployment training and certification have been streamlined and mission focused. All Atlantic attack submarine deployments have been lengthened to 6 months, reducing the proportion of predeployment “overhead” imposed on our deploying submarines. Our SSBN force has been integrated to meet some local submarine requirements formerly fulfilled only by SSNs, without—and I emphasize without—compromising SSBN strategic commitments. Unnecessary or redundant inspections have been

combined or eliminated. Even so, these changes, while important and useful, cannot overcome the tyranny of a smaller force structure.

As a result, in response to the multi-mission “pull” of the warfighting CINCs, each submarine is a multi-mission, multi-theater asset that flows, as needed, from one mission to another and from one theater to another. The multi-mission tasking imposed on submarines as a result will drive multi-mission requirements for the submarines of the 21st century. I would like now to discuss briefly some of these missions in greater detail.

### **INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE (ISR)**

The need for both strategic and tactical intelligence, surveillance, and reconnaissance mission-days has risen inexorably since the end of the Cold War. Despite a reduction of about 50% in submarine assets, ISR mission-days have doubled to meet the intelligence needs of a dynamic and unstable world. The sustained, undetected presence of a submarine provides unique opportunities to gather this data in an unobserved and nonprovocative manner that cannot be replicated by other means. Furthermore, the ability to dwell covertly for extended periods employing multiple sensors defeats efforts to evade collection or deceive satellites and other sensors, some of which amazingly enough have flight paths posted on the internet. The intelligence gleaned from submarine operations ranges from highly technical details of military platforms, command and control infrastructure, weapons systems and sensors to unique intelligence of great importance to national policymakers on potential adversaries’ strategic and operational intentions. And unlike other intelligence collection systems such as satellites, submarines are also full-fledged warfighting platforms carrying militarily significant offensive firepower.

### **STRIKE**

The recent events in the Balkans and Persian Gulf have again featured the power projection capabilities of our Navy. The Submarine Force is playing ever more prominently in this role. SSNs have contributed to every operation requiring combat launches of Tomahawks. For example, USS MIAMI, which recently returned from the Mediterranean and is now enjoying a well deserved 30 day standdown, has launched Tomahawk missiles in strike packages in both Operation Desert Fox and Operation Allied Force. She is the first submarine since World War II to launch weapons against targets in multiple theaters. I’ll talk more about this in a moment.

### **ANTI-SUBMARINE WARFARE**

While a traditional strength of the Navy during the Cold War, anti-submarine warfare capability and proficiency has waned with the reduced force levels, resource constraints on modernizing existing ASW sensors, and a decrease in fleet ASW training opportunities. ASW is now more difficult against new generations of quiet nuclear and diesel submarines. ASW will become increasingly critical to our power projection forces as potential adversaries around the world become proficient in operating the highly capable submarines currently available on the international arms market. The old lessons of potential adversaries employing asymmetric weapons capabilities has not changed.

As Commander of Atlantic Fleet ASW Forces, I know the importance of “combined arms” ASW but must deal with the constraints imposed by limited resources and multi-mission tasking for not only our submarines but also for our Maritime Patrol Aircraft and the Integrated Undersea Surveillance System communities.

At SUBLANT, we try to make submarines available to retain proficiency in this core Navy competency. However, with only about five submarines available for local operations at any given time, we are challenged to provide realistic ASW training opportunities for submarines, MPA, and surface ships. We look for opportunities during our six month deployments to build proficiency with our allies, through many exercises, as I've mentioned, succumb to real world emergent tasking.

Overall, we are working hard to make the most of these assets. The Submarine Force is focused on extracting the maximum acoustic data from existing sonar arrays through improved training, maintenance, and sensor processing. Submariners are working with the MPA community to develop new ASW tactics. We are carefully building deployment schedules to ensure the right submarines and IUSS surveillance ships are deployed at the right time to the right areas with the best equipment and most proficient crews available.

### **INTEGRATION INTO THE JOINT FORCE**

As we know, the submarine's inherent advantages in stealth, agility, and endurance can be applied to create additional capabilities for our Joint Force commanders. We are making existing capabilities known to the joint warfighting community, and we're actively pursuing ways to integrate these capabilities.

Given recent events in the Balkans, submarine contributions to the combined air campaign against Yugoslavia are perhaps the best known of our joint operational capabilities. Since we first launched Tomahawks during Desert Storm, the contributions that submarines make to the overall TLAM strike effort are increasing as a percentage of that overall effort. Submarines consistently provide about 20% of any given carrier battle group's Tomahawk loadout.

In Desert Storm, submarines launched just 4.25% of the Tomahawks successfully fired. As of this week, Allied submarines in the Adriatic have successfully fired 23% of the TLAMs launched. In fact, fully 64% of all TLAMs launched in anger by U.S. submarines have occurred in the last six months. Submarine strike operations were fully integrated into the Allied battle plan, both enabling and complementing Allied tactical air operations. And submarines provide the Navy with a uniquely stealthy, long term, on station surprise or "no notice" strike capability.

We also have a long and intimate relationship with the United States Special Operations Command, dating back to the standup of that organization in 1987. With the recent decommissioning of JAMES K. POLK and the imminent decommissioning of KAMEHAMEHA, we're working on ways to execute our joint SOCOM missions with our LOS ANGELES (688) and Improved LOS ANGELES (688I) class submarines.

We know that our principal challenge to full integration into the joint world will be connectivity. Having been the Silent Service for so long, we're challenged to overcome our own culture of silence and the technical challenges of moving vast amounts of data through the surface of the sea as quickly and securely as possible. But we're rising to that challenge. We have detailed plans to upgrade the connectivity not only of our battle group submarines, but all our submarines. The Joint Force Commander needs our stealth, our agility, and our endurance to achieve full spectrum dominance. The Submarine Force is working hard to meet this need.

Given this review of Submarine Force structure, submarine mission areas, and the inexorable pull for submarine services, I would like to share my views on the requirements for submarines as we enter the 21st century.

First, I cannot stress strongly enough the needs for adequate numbers of submarines. While each individual submarine with its highly capable crew can be a marvel of technology and tactical

expertise, at some point quantity becomes its own quality. Exhaustive studies of submarine requirements have all come to the conclusion reached by the Defense Science Board study on the Submarine of the Future—that submarines are a crown jewel of our nation’s defense establishment and that we need more, not fewer attack submarines. Although the QDR directed force level of 50 SSNs is sufficient to meet requirements for two Major Theater Wars, the Fleet Commanders-in-Chief have validated peacetime requirements for 72 attack submarines. In my view, 50 SSNs is an absolute lower limit to the number of attack submarines that the nation needs. We are gapping CINC requirements now with 58 SSNs. Even more critical requirements will be gapped when we reach 50.

Second, continued stealth is paramount. We must protect and enhance acoustic and non-acoustic stealth as our first order of business. Stealth is the ultimate form of self-protection, and it is this quality which first and foremost allows surprise.

Third, submarines’ connectivity must be augmented to integrate fully into joint operations, and to take full advantage of their ISR capabilities, strike, and Special Operations potential. While strides have been made, we must work hard to install the secure and stealthy high bandwidth connectivity to provide real time information to battle group commanders, theater CINCs and our national leaders. Connectivity spells relevance for a myriad of time sensitive operations.

Fourth, the Submarine Force must be a full partner in future weapons and payload developments to ensure we can bring the capabilities required to the warfighting CINCs. Submarine involvement in Tomahawk development from its inception to today’s Tactical Tomahawk program is a good model to build on, but we must ensure that future land attack missile programs are cooperative in nature—not only with our surface warfare brethren—but with the Army and/ or Air Force. Expansion of our payload capability where it makes sense is mandatory. As always, combat capability is the metric.

Fifth, new submarines must be built with ease of maintenance firmly in place. With life of ship cores and a deliberate reduction in depot level and modernization repair periods, we must take advantage of modular construction, advanced coatings, high performance commercial off the shelf (COTS) components and high technology to reduce the maintenance burdens placed on the backs of our sailors. Otherwise, the ships will not perform optimally throughout their design life and our personnel challenges will become exacerbated. The Virginia Class exploits many of these new technologies in its maintenance regime.

Sixth, ongoing submarine maintenance needs robust support. A staple of day-to-day readiness, our maintenance infrastructure and spare parts supplies are a continuing source of concern for me as a Type Commander.

Finally, our submarines must be manned by the right people in the right numbers. Here again, quantity imparts its own quality, measured here in quality of life. Submarines, manned below their authorized strength and with sailors missing the skills needed to fight and maintain these technical marvels, cannot deliver combat capability to the warfighting CINCs. We must work hard to attract and retain the nation’s best and brightest to be able to take our submarines into harm’s way and, more importantly, to bring them back intact.

Now, after this 50,000 foot view of submarine support of national objectives today and the requirements for future submarines, I’d like to elaborate on this theme in the context of DEVRON 12’s historic role in our Submarine Force. Let’s consider some illuminating parallels between the 1949 era, when DEVGRU 2 was founded, and the 1989 era, when the Berlin Wall fell.

- Immediately following World War II, having won the victory, the Navy at-large was at risk of losing the peace. The victim of its own success, it engaged in an enormous drawdown from a war winning colossus to a peacetime pygmy.
- In 1989, the Navy will soon become a victim of its own success, as it is viewed as a peace dividend to be cashed rather than as a growth industry to be invested in.
- In 1949, submarines were the foundation of victory in the Pacific. As Theodore Roscoe so eloquently stated in his history of the Submarine Campaign, “The atomic bomb was the funeral pyre of an enemy who had been drowned.”
- In 1989, as the Berlin Wall falls, and the first cracks appear in the supposedly monolithic Soviet Union, submarines can claim fair credit for their role in the victory of the West in the Cold War.
- In 1949, the nation faced a Soviet Union whose growing submarine force menaced our own trade routes. This just four short years after the enemy battle fleet and merchant marine against which the Submarine Force had been so successful had disappeared. And, as everyone knew, submarines had no role in anti-submarine warfare ...
- In 1989, the Submarine Force loses another adversary against whom it had been supremely successful as the blue water aspirations of the Soviet Submarine Force begin to succumb to the chaos and entropy of the Russian Federation. Once again, the “usual suspects” appear to declare the “end of history” as far as the Submarine Force is concerned. Because, as everyone knows, submarines have no useful role besides anti-submarine warfare ...

Well, the usual suspects were wrong in 1949, they were wrong in 1989, they are wrong today, and they will be wrong tomorrow. The brash submarine COs of World War II, who weren't used to giving up without a fight, weren't about to start when the Submarine Force was offered up for sacrifice in the late 1940's. The phenomenal success of DEVRON-12 in leveraging the World War II legacy of Navy laboratory expertise and the dawning promise of nuclear propulsion to make submarines the premier ASW asset in our Navy was the result of their foresight and tenacity. In a repeat of its history, DEVRON-12 refocused its efforts in the 1990's to bring the spirit of experimentation and innovation found at the dawn of submarine ASW into all submarine mission areas. As examples, building on the accomplishments of my predecessors Admiral Mies and Rear Admiral Lacroix, DEVRON-12 undertook an explosion of tactical innovation:

- The DEVRON charter was modified in 1992, for the first time since 1949, to authorize tactical development in areas other than ASW. Now, this had been happening prior to the official change, but the modification marked the depth of commitment to tactical development across the entire spectrum of mission areas.
- As you can see from this seven year old graphic that my DEVRON staff produced for me, the Tactical Development exercise program changed dramatically in 1991 from an ASW exclusive program to a one exploring littoral operations, mine reconnaissance, and Navy Special Warfare just to mention a few. ASWEXs became TACDEVEXs to demonstrate the new scope of our tactical development ambition. Among the exercises which DEVRON-12 sponsored in 1991 to 93 timeframe, one finds:
  - A major shift to mainly shallow water anti-diesel work employing both active and passive sonar. These exercises resulted in detailed tactical guidance for active search and attack and for realistic simulation of a diesel submarine's characteristics.

- TLAM flex targeting exercises.
- Major very shallow water torpedo exercises.
- The largest Special Warfare exercise involving submarines since World War II. This exercise also included the embarkation of the JTF commander on one of the subs and members of Army, Navy, Air Force Special Forces plus Marine Force Recon.
- Numerous exercises exposing the weaknesses of the BSY-1 HF sonar in minefield detection and avoidance.
- A minefield survey and recovery exercise.
- Submarine Launched Mobile Mine.

In addition:

- DEVRON 12 worked with the submarine leadership to produce an unclassified study titled “Submarine Roles in the 1990’s and Beyond.” Today, seven years later, ADM Bowman has followed with his seminal work, “Submarines in the New World Order,” continuing the long-term education of our service comrades and national leaders on the uniquely valuable capabilities of our nation’s submarines.

These initiatives are bearing fruit today with our successes in submarine strike, in our growing relationship with the Special Warfare Community, in our mine reconnaissance programs, and many more areas that Commodore Gove described in glowing detail.

I point out these historical parallels as testimony to the vibrant role DEVRON 12 has had in the continuing effort to bring the submarine’s enduring characteristics of stealth, endurance, agility, and firepower to bear, often in the face of so-called conventional wisdom. With this in mind, what challenges face the Submarine Force and the DEVRON as we enter a second half-century of innovation?

First, as Commodore Gove has alluded to, we will have fewer submarine assets available for dedicated tactical development exercises. While DEVRON will still retain its operational character—an absolute key to successful tactical development—it will have fewer submarine—days available for exercises.

Second, as a Navy we are coming to rely more and more on Allied capabilities. Naval warfare will be coalition warfare. The British employment of submarine Tomahawks in Yugoslavia in tandem with our own Tomahawk strikes is a timely example of this trend.

Third, initiatives in Navy and Joint experimentation will take up more resources in terms of time, money, and talent. These initiatives promise, at least on the surface, to guide the way to the joint, netted warfighters of the future.

What do these challenges hold in store for our Submarine Force? Well, I don’t have all the answers here. If I did, we wouldn’t need Admiral Mies and Admiral DeMars to wrap up for us. But, let me tip my hat to the future and outline what a successful strategy to meet these challenges should include.

We need to empower all of our submarine COs and crews to feel that they have a personal and professional stake in submarine tactical development. We need to continually tap into this

renewable resource of enthusiasm and expertise. The people who have to think about these things on a day to day basis—and I know of no submarine CO who doesn't think about them—are best placed to generate innovative ideas, tactics, and procedures. Now there are real challenges to doing tactical development in this fashion in the rigorous, analytical way that yields real results. When commodore, I replaced exercise quicklook messages with personal letters from the CO. Like any initial report from the battlefield, the quicklooks were often riddled with error and exhibited the tendency to declare victory prematurely—and I might add here—to a broad audience. But we can involve our COs effectively—many are volunteering their thoughts now to good effect. Recent examples of submarine strike procedures from MIAMI and special warfare procedures from L MENDEL RIVERS, where thoughtful COs addressed real world problems, give me hope for this line of approach.

We need to continue to leverage the interest, expertise, and assets of our Allies in tactical development. Our work with the United Kingdom—warriors in arms could be a case study in success all by itself. Again, Commodore Gove has described our successes here in lapidary detail. The operational advent of the COLLINS class in Australia and the 2400 class (formerly the UPHOLDERS) in Canada provide us with additional opportunities for the future. We need to continue to generate innovative concepts for submarine employment. What can we do to overthrow the tyranny of the 21" torpedo tube? What's the best way to employ submarines in Information Operations? What kind of Unmanned Undersea Vehicles should submarines deploy? What kind of Unmanned Aerial Vehicles or Unmanned Combat Aerial Vehicles can submarines launch? How about submarines in National Missile Defense? Some of these concepts may seem far-fetched or counter-intuitive or not technically feasible. But, then again, *so did submarine ASW in the 1940's and submarine launched ballistic missiles in the 1950's*. This leads me to my final point.

We need to embed submarines, submariners, and our new concepts for submarine employment in warfare experimentation at the Navy and the Joint levels. Personally, I think submariners, with the legacy of DEVRON 12, can bring the necessary intellectual honesty and analytical rigor to any truly experimental effort. CAPT Andrews said it best in his summary of DEVGRU 2 contributions: "The early DEVGRU/RON attitude of *open shop and tell the truth based on sea trials* was established by Captain Benson and has been maintained over the years."

We need continuity of leadership at DEVRON 12. In almost four decades from 1951, all but three squadron commanders served in command for two years, or more. In the last ten years four squadron commanders have served for only a year each.

In order to truly innovate and experiment, you have to risk failure and you have to tell the truth about what works and why. If nothing fails in your experiment, then you're not experimenting with innovative ideas—you're demonstrating proven concepts. Now there is great temptation not to experiment. The threat of a failed experiment is too great for some to stomach. But, as Linus Pauling said, "The best way to have a good idea is to have lots of ideas." Obviously, the good ideas will emerge from the not so good ones if you rigorously experiment, over long periods of time, and are honest about the results. A classic DEVRON 12 example of this is the shallow water torpedo development over the last decade. In August of 1991, we embarked on an exercise program to test the performance of our Mk48 and ADCAP torpedoes in shallow and very shallow water. The abysmal performance of these torpedoes became more and more evident with each exercise. Accordingly, the Submarine Force embarked on an ambitious program of testing and experimentation of real weapons in real world shallow water experiments, shooting over 300 weapons. The upshot of this is a much improved ADCAP torpedo with an ongoing improvement program. We, the Submarine Force, the Navy, and the Department of Defense, need real experimentation of the kind DEVRON 12 has been doing for 50 years.

ADM DeMars—thanks for the opportunity to speak today on our Submarine Force and its contributions to national objectives. As I hope you sense from my remarks, the concrete contributions of our fantastically capable submarines and submariners have been enabled by the genius and hard work of the DEVGRU and DEVRON staffs and their submarines over the last half century. But, in the end, the greatest submarine contribution to our nation may prove to be the spirit of inquiry, experimentation, and analysis that DEVGRU 2 and DEVRON 12 have fostered in our Navy. We must work to ensure that such a spirit thrives for the next 50 years.