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RECENT U.S. NAVY INCIDENTS AT SEA

HEARING

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

SEPTEMBER 19, 2017

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RECENT U.S. NAVY INCIDENTS AT SEA

TUESDAY, SEPTEMBER 19, 2017

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

The committee met, pursuant to notice, at 10:08 a.m. in Room SD–G50, Dirksen Senate Office Building, Senator John McCain (chairman of the committee) presiding.

Committee members present: Senators McCain, Inhofe, Wicker, Fischer, Cotton, Rounds, Ernst, Tillis, Sullivan, Strange, Reed, Nelson, McCaskill, Shaheen, Gillibrand, Blumenthal, Donnelly, Hirono, Kaine, King, Heinrich, Warren, and Peters.

OPENING STATEMENT OF SENATOR JOHN MCCAIN, CHAIRMAN

Chairman MCCAIN. Well, good morning. This committee meets this morning to receive testimony on recent U.S. Navy collisions at sea, including USS [United States Ship] *Lake Champlain,* USS *Fitzgerald,* and the USS *John S. McCain,* as well as the grounding of USS *Antietam.*

We welcome our witnesses: The Honorable Richard Spencer, Secretary of the Navy; Admiral John Richardson, Chief of Naval Operations; and Mr. John Pendleton, Director of Defense Force Structure and Readiness Issues at the Government Accountability Office.

I'd like to take a moment to recognize family members who have lost loved ones in the *Fitzgerald* and *McCain* collisions, who are here with us today as our honored guests. From the *Fitzgerald,* Eric Rehm, the wife of Chief Petty Officer Gary Rehm; Stephen Ritsuko and Shono Douglass, parents and brother of Petty Officer Third Class Shingo Douglass; Senior Chief Petty Officer Victor and Carmen Sibayan and their son, Luke, parents and brother of Petty Officer First Class Carlos Victor Sibayan; Wayne and Nikki Rigsby, father and stepmother of Seaman Dakota Rigsby; Darrold Martin, Chief—father of Petty Officer First Class Xavier Martin. From the *McCain,* Jennifer Simon, wife of Petty Officer First Class Kevin Bushell, and his mother, Karen Bushell, along with her wife, Anne Shane; Rachel Eckels, mother of Petty Officer Second Class Timothy Eckels; Theresa and Austin Palmer, mother and brother of Petty Officer Second Class Logan Palmer.

Let me express my deepest condolences to you all on behalf of this committee, the U.S. Senate, and the American people. Your presence here today reminds us of our sacred obligation to look after the young people who volunteer to serve in the military.

Would those individuals who I just named stand so that we can recognize their presence here?

Thank you. And God bless.

The USS *John S. McCain* was named after my father and grandfather. I remember the ship-launching ceremony, nearly 25 years ago. My wife, Cindy, continues to serve as the ship's sponsor. So, believe me, these tragedies are personal for me and my family, as well, and we share in your sorrow.

My commitment to all of you is that we will get to the bottom of these incidents. It's simply unacceptable for U.S. Navy ships to run aground or collide with other ships. To have four such incidents in the span of 7 months is truly alarming. This committee takes seriously its oversight role. We will identify shortcomings, fix them, and hold people accountable. We will learn lessons from these recent tragedies to make the Navy better, and all who serve in it safer.

I know our Navy leaders share these goals and will work together with us to achieve them. To that end, I hope our witnesses will help the committee better understand what happened with regard to these incidents. We are interested in the status of investigations, common factors or trends identified, root causes, corrective actions, and accountability measures. We'd also like to know the extent and cost of damage to the ships, and operational impacts of unanticipated repairs. Finally, we ask you to highlight the areas in which we, in Congress, can assist to help ensure the safety and proficiency of our sailors, including changes to current law.

I'm deeply concerned by Mr. Pendleton's written testimony, which indicates 37 percent—that's over one-third—of the training certifications for U.S. Navy cruisers and destroyers based in Japan were expired as of June. As he notes, this represents more than a fivefold increase in the percentage of expired warfare certifications for these ships in the last 2 years. I would point out, warfare certifications are a ship's ability to fully be prepared to engage in combat. Press reporting paints an even bleaker picture. The *McCain* had experienced expired training certification in 6 of the 10 key area—key warfare mission areas. The *Fitzgerald* had expired certification in all 10 mission areas.

Secretary Spencer and Admiral Richardson, I don't need to tell you that this is troubling and it is unacceptable. We acknowledge and appreciate the accountability actions the Navy has taken to date. The Navy has relieved two commanding officers, a commander and captain. It has issued 20 reprimands to other officers and enlisted sailors. Since August 23, the squadron two-star strike group and three-star fleet commander will all have been relieved, for cause. I assure you that this committee will do everything we can to support the Navy leadership's efforts to course correct, but we must also call you to task and demand answers. As leaders of our Navy, you must do better.

Particularly, I'd like to know why the recommendations of the GAO [Government Accountability Office] and other relevant reviews, such as the 2010 Fleet Review Panel, were not effectively implemented and maintained. The lives of the 17 sailors lost in the *Fitzgerald* and *McCain* collisions were priceless, and I mourn their loss. These preventable incidents also come with a very real

pricetag, in terms of cost to taxpayers. I understand the current estimate for repairs is approximately $600 million. But, the cost will also be felt in unexpected deployments for other ships to meet operational requirements.

I'm also concerned by the apparent difficulty of navigating safely in the western Pacific. With three of these ships now nondeployable for months or years, due to damage repairs, there are serious questions about our maritime readiness to fight in response to North Korean, Chinese, and Russian aggression. The ongoing reviews directed by Secretary Spencer and Admiral Richardson must quickly get to the bottom of this and identify root causes, corrective actions, and further accountability actions. Time is of the essence. I hope these reviews fully examine how discrete changes over the years have resulted in prioritizing the need to do more with less, which has come at the expense of operational effectiveness. These changes include longer deployments, so-called optimal manning of ships, less hands on and initial training, less time for maintenance, less time to train, and an officer personnel system governed by laws, like the Defense Officer Personnel Management Act and the Goldwater-Nichols Act, which were put in place more than three decades ago and which may have created a preference for breadth of experience over depth of technical experience. We need to look seriously and rigorously at all of these types of systemic contributing factors. I would like your assurance, Secretary Spencer, that you will do so, and that, as you consider additional accountability actions, you will look at all levels of command, as appropriate.

While we are focused on incidents at sea today, this committee recognizes that the current readiness crisis affects all of our military services. It is part of a larger, deeper trend of forcing military units, at the tactical level, to try to do too much with too little. In the last 3 years, fatal training accidents have taken the lives of four times more servicemembers than our enemies have in combat. This cannot continue.

Unfortunately, this is an issue of command. There's plenty of blame to go around for the deteriorated state of our military. We cannot ignore Congress's responsibility. Years of budget cuts, continuing resolutions, and sequestration have forced our military to maintain a high operational tempo with limited resources. We know that has come at the cost of training, maintenance, readiness, effectiveness, and the lives of too many brave young Americans. Our Service Chiefs, including the Chief of Naval Operations, have testified repeatedly that the Budget Control Act and sequestration are endangering the lives of our men and women in uniform. My dear friends, we were warned.

To fix this problem, we must all do better. Military leaders must make honest assessments of their requirements and request the full extent of what they need. In turn, we, in Congress, must provide these resources in a timely and predictable way. That is the only way to truly restore the readiness of our force. It is the only solution to ensuring that accidents like this do not happen again. It is the bare minimum we owe to the brave men and women who risk their lives to defend our Nation.

Senator Reed?

STATEMENT OF SENATOR JACK REED

Senator REED. Thank you, Mr. Chairman.

I want to join Senator McCain in welcoming Secretary Spencer and Admiral Richardson and Mr. Pendleton to the committee this morning to testify on the issues surrounding the recent accidents and the Department's plan for determining what went wrong and what steps need to be taken to ensure such accidents do not occur in the future.

Service in the Nation's Armed Forces can be very dangerous. The country is saddened whenever we lose one of America's sons or daughters, but it is particularly disturbing when young people are casualties in the course of conducting normal peacetime operations. I want to extend my condolences to the families of those who were lost. I know I join all my colleagues and Chairman McCain in expressing our profound sympathy for your loss.

We should not prejudge the outcome of the internal Navy reviews of the circumstances around these accidents. However, we do know that the Department of the Navy has been facing serious readiness problems caused by deferred maintenance, reduced steaming and flying hours, and canceled training and deployments. In addition, the Navy, like other services, has also been operating at a very high tempo for a long period. These conditions have been aggravated by many years of budget constraints and uncertainty which have forced leaders into making difficult decisions. All these factors have inevitably taken a toll on Navy commanders and Navy operations.

Secretary Spencer and Admiral Richardson, I ask your commitment that you are giving this situation your full attention, that you will follow these investigations wherever they lead, and that you will share all findings with Congress. We must do all that is necessary to provide and sustain our Navy and all our Armed Forces.

Again, I thank the witnesses, and I look forward to the testimony.

Chairman MCCAIN. Secretary Spencer.

STATEMENT OF HON. RICHARD V. SPENCER, SECRETARY OF THE NAVY

Mr. SPENCER. Chairman McCain, Ranking Member Reed, distinguished members of this committee, I want to thank you for the opportunity to appear before you and talk about the state of our Navy.

Before we move forward, though, I want to express our deepest condolences to the families and loved ones and the crews who have lost one of their own in the last few months. Having looked into the eyes of many of these families, and shared time with them, knowing that their returned ones returned home in a flag-draped casket, I know my words are completely insufficient. To the families present, please know that Polly and I have you in our thoughts and prayers.

The 17 sailors from the USS *Fitzgerald* and *John S. McCain* were sons, brothers, husbands, fiancés, uncles, and friends. They were patriots, and they will not be forgotten. We pledge our full support to their families and crews. We're going to back our words

with actions. We have a problem in the Navy, and we're going to fix it.

In addition to the investigations already initiated, we are conducting two thorough reviews. The CNO's [Chief of Naval Operations] comprehensive review will take a look at the tactical and operational situation at hand. My strategic readiness review will be an independent team comprised of military and industry experts that will look and examine root causes, accountability, long-term systemic issues, and then provide remedial insight. These reviews will complement and enhance each other, providing the depth and criticality to the—that the situation demands.

After I've received and reviewed the recommendations from our teams, I will act, to the limits of my authority, to change processes and acquire any needed capabilities in order to protect our people.

I'm here today to impress our sense of urgency and to highlight a way forward to renew a culture of safety and training across the fleet. We will take lessons learned from the recent tragic events and come out the other side a stronger, more capable Navy/Marine Corps team.

Make no mistake, we are not waiting 60 days or 90 days to make adjustments. The CNO will address a list of actions the Seventh Fleet is taking immediately to address the situation at hand, ranging from ship-to-ship materiel inspections to the activation of AIS [Automatic Identification System] radar identifications while we're trafficking specific areas. We are not lying idle, and I can tell you, ladies and gentlemen, we are committed.

I appreciate the opportunity to work with you on the remedial solutions and to find our way forward.

Thank you, and I'll forward to your questions.

[The prepared statement of Mr. Spencer follows:]

PREPARED STATEMENT BY SECRETARY RICHARD V. SPENCER

Chairman McCain, Ranking Member Reed, and distinguished members of the Committee, thank you for the opportunity to appear before you today to discuss the current state of the Department of the Navy. The issues of safety and training and their impact on readiness are of vital importance to the security of our Nation, and are at the forefront of every decision we make.

As you are well aware, the USS *Fitzgerald* and USS *John S. McCain* were recently involved in two separate collisions that resulted in the loss of 17 U.S. sailors. These sailors served with honor and pride and we, as a Service, a Department, and a Nation, deeply mourn this great loss, alongside their families. These sailors will not be forgotten, and our Navy stands in solidarity in support of these families and crewmembers. These sailors were not just Navy crewmen but sons, brothers, husbands, fiancés, uncles, and friends. The stories from surviving members' actions taken to save these ships are a direct testament to the heroism and dedication of our sailors. I appear before you today committed to understanding exactly what happened, why it happened, and how we prevent it from happening in the future. Most important is what we learn from these tragic events. You have my pledge that I will work diligently and tirelessly to examine, listen, and put in place the appropriate adjustments in operations and policy to reestablish a culture of safety and training across our Fleet, a commitment that I know is fully and equally shared by Admiral Richardson and the rest of the Navy leadership.

The Navy has had an increase in surface fleet incidents within the past eight months that has resulted in significant loss of life and injury. Three of the ships involved—the USS *Fitzgerald* (DDG 62) and USS *John S. McCain* (DDG 56), and the USS *Antietam* (CG 54), which ran aground in on shoals just outside the Yokosuka Naval Base, were homeported in Yokosuka, Japan. Additionally, during this same time period, there was the collision between USS *Lake Champlain* (CG 57) and a South Korean fishing vessel. As we mourn the loss of our sailors, we must

look forward, learn, and improve upon the ways we operate. As Secretary of the Navy, I am responsible for ensuring we find out how and why this happened and put the necessary controls and procedures in place to prevent this in the future.

Make no mistake; we have a problem. Investigations have been initiated. We have completed a commander stand down to start the discussions addressing items of concern and points of friction. Additionally, both the Service and the Department have started reviews. We have taken immediate steps through the start of these investigations and reviews to examine root causes in order to address systemic issues.

While the formal investigations into each event are underway, the CNO and I have called for two additional reviews. Admiral Philip Davidson, Commander of Fleet Forces Command, is leading a 60-day Comprehensive Review. This Comprehensive Review will examine individual training and professional development, unit level training and operational performance, development and certification of deployed operational and mission standards, deployed operational employment and risk management, material readiness, and utility of current navigation equipment and combat systems, and will include recommendations on corrective actions.

In addition to the Comprehensive Review, I have commissioned a Strategic Readiness Review, assembling a team of outside experts with a deep knowledge of operational and organizational risk management. This group will look at longer term trends and bring their expertise to my review of the recommendations that result from the Comprehensive Review's efforts. Additionally, the team will review appropriate accountability mechanisms across the Department of the Navy, identify any deficiencies, and offer recommendations to reduce the potential for such tragic events in the future. Together, these reviews will provide the appropriate depth, criticality, and completeness demanded and deserved by our Nation and service members in the wake of recent trends. It will provide the construct from which we will learn and make course corrections for the way forward.

While theories about causal factors for the recent events abound, I believe it is in the best interest of the Service and the Nation to resist the temptation to jump to conclusions, speculate on causes, continue to assess responsibility, and articulate solutions until we have completed all investigations and reviews. Our investigations and reviews will be fact-based, informed by experts, and supported by evidence and data. It is our obligation to ensure the highest integrity of these investigations and reviews, and we will protect the process at all costs. That includes the responsibility to be fully transparent about that process, transparency to which the Department and I are committed. When the investigations and reviews are complete, I look forward to sharing their results with you and the American people.

As we examine the systemic issues associated with these tragic incidents, we look to Congress to assist us in our path forward. Once I have received and reviewed the recommendations made by the review teams, I will act to the limits of my authority to change processes, acquire any needed capabilities, and protect our people. We will address any cultural shifts that might be called for, so we may chart a path that ensures we operate and train in an environment that is based upon a culture of safety.

All of these efforts rest on a foundation of sufficient and predictable funding to sustain our readiness. As I stated in my confirmation hearing, the Navy-Marine Corps team, their families, and their civilian teammates have never failed our Nation, and they never will. However, I believe that we are failing them through such actions as the Budget Control Act and repeated continuing resolutions. This imbalance must be rectified.

I appear before you today with a plan, as well as with a sense of urgency, to renew a culture focused on safety and training across the Fleet. I commit to you that we will not just look forward, but will lean forward to take the lessons from these terrible events and incorporate them into the operations of this enterprise. I appreciate the opportunity to share our efforts and continue to work together to find ways to support our Navy, and I look forward to your questions.

Chairman MCCAIN. Admiral Richardson.

STATEMENT OF ADMIRAL JOHN M. RICHARDSON, USN, CHIEF OF NAVAL OPERATIONS

Admiral RICHARDSON. Chairman McCain, Ranking Member Reed, and distinguished members of the committee, I also want to thank you for the opportunity to appear before you today to discuss the recent U.S. Navy incidents at sea.

To begin with, I also want to express my deep condolences to the families of the 17 sailors who served their country with honor and distinction and lost their lives in USS *Fitzgerald* and USS *John S. McCain.* In both of these tragic incidents, our sailors acted heroically to save their ships as they combated flooding and the loss of critical systems. Care and support to these families, the families of our sailors, is our top priority. I've committed to them that we will learn everything we can from these tragic events to prevent another accident. As you pointed out, sir, many of the family members are here today. We will always stand with you.

What we do is inherently dangerous, but it is leadership responsibility to ensure we provide the right training and oversight to keep our teams safe and effective. We are taking immediate corrective actions to ensure we meet the training and materiel readiness standard to prevent another mishap.

We are not stopping with immediate actions. In addition to the investigations into the specific incidents on *Fitzgerald* and *McCain,* we're conducting, as the Secretary pointed out, a comprehensive review, which will turn over every stone to examine for more systemic problems. This review will complement the Secretary's strategic review.

I've testified several times about the triple whammy, the corrosive confluence of high operational tempo, inadequate budgets, and budget uncertainty. The funding approved in fiscal year 2017 is being used to plug our most urgent readiness holes in the fleet, and our 2018 request sustains that progress. While we have prioritized maintenance and readiness dollars, full recovery will not happen overnight; it will take years with stable and adequate resources.

But, make no mistake, sir, while these factors do exert a negative force on the challenges we face, at the core this issue is about leadership, especially command. Our first dollar, our first molecule of effort, our first team must go to safety. Safety is first. No matter what the situation, those charged with command must achieve and maintain a standard that ensures their teams are trained and ready to safely and effectively conduct assigned operations. We must remain vigilant to meeting this standard, fighting against every pressure to erode it.

Our commanders must meet the absolute standard to develop safe and effective teams. If we cannot meet the standard, we do not deploy until we do. We must establish a command climate that supports honest reporting.

Senator, these incidents demand our full attention. We must provide our sailors the necessary resources and training to execute their assigned missions. I am accountable for the safe and effective operations of our Navy, and we will fix this. I own this problem. I'm confident that our Navy will identify the root causes, and correct them, and that it will be better in the end.

Again, thank you for the opportunity to be here, and I look forward to your questions.

[The prepared statement of Admiral Richardson follows:]

PREPARED STATEMENT BY ADMIRAL JOHN M. RICHARDSON

Chairman McCain, Ranking Member Reed, and distinguished members of the Committee, thank you for the opportunity to appear before you today to discuss the

recent U.S. Navy incidents at sea. To begin, I want to express my deep condolences to the families of the 17 sailors who served their country with honor and distinction and lost their lives in USS *Fitzgerald* and USS *John S. McCain.* In both of these tragic incidents our sailors acted heroically to save their ships as they combatted flooding and the loss of critical systems. Care and support to the families of these sailors is our top priority. I have committed to them that we will learn everything we can from these tragic events to prevent another accident. We will always stand with these families.

What we do is inherently dangerous. It is a leadership responsibility to ensure we provide the right oversight and training to keep our team at their operational peak. We are taking immediate actions to prevent another mishap.

- I directed a pause across the Navy, both ashore and afloat, to review our fundamentals to ensure safe and effective operations, and to correct any areas that require immediate attention. This pause has been completed, with commanders incorporating deliberate processes in their operations to better manage risk.
- We have commenced Readiness for Sea Assessments (RFSA) for all ships assigned to Japan, to inspect and assess watchstander proficiency and material readiness to ensure ships are able to safely navigate, communicate and operate. Immediate remediation will be conducted for ships found deficient, and they will not be assigned for operational tasking until they are certified to be ready.
- We have taken measures to ensure our sailors get sufficient sleep in all shipboard routines to address fatigue concerns.
- All material problems involving ship control have been given increased priority for repair.
- To ensure Seventh Fleet ships are properly certified, the Pacific Fleet Commander is standing up Naval Surface Group Western Pacific (NSGWP) to consolidate authorities to oversee the training and certification of forward-deployed ships based in Japan.
- We have commenced a review of certifications of each ship, to include developing a plan for each to regain currency and proficiency across all certification areas. All waivers for ships whose certification has expired will now be approved by the Pacific Fleet Commander.
- We have increased focus across the force on open communication and thorough debriefing and assessment of operations and evolutions through instilling the practice of "Plan, Brief, Execute, Debrief" across commands. Other cultural changes include increasing unit-level operational pauses, increasing access to lessons learned, and encouraging time for repercussion-free self-assessments.

In addition to these actions, the pause yielded results across all communities to promote a renewed focus on safety, communication and professionalism in the execution of "routine" operations. Leaders at every level addressed fighting against over-confidence, inattention, and complacency through emphasis on adherence to procedures and on applying sound operational risk management procedures. We will continue to enhance our safety culture in which each sailor is empowered to act to control hazards before they become a mishap.

We are not stopping there. In addition to the investigations into the specific incidents on USS *Fitzgerald* and USS *John S. McCain,* the Vice Chief of Naval Operations directed a Comprehensive Review to examine for more systemic problems. Led by Admiral Phil Davidson, Commander, U.S. Fleet Forces Command, this effort will review individual training and professional development, to include seamanship, navigation, voyage planning, leader development and all aspects of tactical training. The review will also address unit level and operational performance, to include oversight and risk management at all levels of the chain of command. The development and certification of deployed operational and mission standards—force generation—will be reviewed, with an emphasis on Forward Deployed Naval Forces. It will also include a review of the material readiness of our ships, and the systems required to operate them, to include navigation, propulsion, steering, combat systems and material availability. The review team includes experts from within the Navy and outside experts from other services, academia, and the civilian sector. This approach will help ensure we don't have any blind spots as we look hard at every aspect of our operations. We will be transparent with the results of these reviews and our actions.

I have testified several times about the "triple whammy"—the corrosive confluence of high operational tempo constrained funding levels, and budget uncertainty. Although warfighting capabilities of ships have dramatically increased in the last century, the size and scope of U.S. responsibilities around the world have also

increased, and the Navy is feeling the strains of consistently high operational tempo. Added to this challenge, eight years of continuing resolutions and the Budget Control Act have impacted the ability to plan and schedule training, ship maintenance, and modernization. With the $2.8 billion in funding approved in fiscal year 2017, we are plugging the most urgent readiness holes in the fleet. Our fiscal year 2018 request sustains the readiness progress, increases end strength, modernizes our current platforms, and purchases future platforms and capabilities needed to sustain the advantage over our adversaries. While we have prioritized our maintenance and readiness dollars, the positive effects of funding will not remove this deficit overnight; it will take time with stable resources to sustain the upward trend.

While these factors exert a negative force on the challenges we face, make no mistake: at the core, this issue is about command. No matter what the situation, those charged with command must hold the standard that ensures our forces are trained and certified to safely and effectively conduct assigned operations. We must remain vigilant to meeting this standard, fighting against every pressure to erode it. We must look at our "can do" culture and ensure it is also a culture that promotes a clear-eyed view of safety and readiness.

We have been subject to:

- budget pressures to "do more with less"
- operational pressures to put busy forces on station more quickly and more often
- schedule pressures to make adjustments to training and maintenance plans.

None of these can excuse our commanders from adherence to the absolute standard to develop safe and effective teams. And when we fall short of the ideal, we must make a thoughtful assessment of the results, and where necessary put mitigations in place. If the situation becomes untenable and we cannot meet the standard, we must not deploy until we're ready. It is the diligence and leadership of our commanding officers at every level that will implement the changes needed to ensure our Navy remains the world's most capable Navy.

These incidents demand our full attention to provide our sailors the necessary resources and training to execute their assigned missions. I own this problem. I am accountable for the safe and effective operations of our Navy, and we will fix this. I am confident that our Navy will identify the root causes and correct them, and that we'll be better in the end. I look forward to your questions.

Chairman MCCAIN. Mr. Pendleton.

STATEMENT OF JOHN H. PENDLETON, DIRECTOR, DEFENSE FORCE STRUCTURE AND READINESS ISSUES, GOVERNMENT ACCOUNTABILITY OFFICE

Mr. PENDLETON. Chairman McCain, Ranking Member Reed, members of the committee, thank you for having me here today to summarize GAO's work on Navy readiness.

Mr. Chairman, I don't know what caused the tragic recent accidents, but I do know, from my work, that the Navy's caught between an unrelenting operational demand and a limited supply of ships. At this point, I'm skeptical that the Navy will be able to make significant readiness gains unless the demands on them are decreased. Even with increased funding going forward, my assessment agrees with the Navy, that it will take several years to rebuild training, manning, and maintenance, foundations of readiness that have become shaky over time.

Our work has also revealed significant management issues that the Navy must confront. In a 2015 report, we found that the ships based in Japan had such aggressive deployment schedules that they did not have dedicated training periods, like ships in the United States do. In fact, we were told that the ships based overseas were so busy that they had to train on the margins. When I asked what that meant, it was explained to me that it meant that they had to squeeze in training when they could.

The assumption, I think, was that the Seventh Fleet, because it was perpetually in motion, it was ready. I think the Navy has now realized that this conventional wisdom was, in fact, likely faulty. We recommended at the time, back in 2015, that the Navy revise deployment schedules to create dedicated training time, and also, more broadly, assess the risk associated with increased reliance on overseas basing of ships. DOD [Department of Defense] and the Navy agreed with us, at least on the paper, but they've taken little action since to implement our recommendations.

The Navy has other even more broad management challenges that it must address, like ship manning. A Navy internal study found that sailors were often working over 100 hours a week, back in 2014, and it concluded that this was unsustainable and potentially contributing to a poor safety culture. We recommended, in brief, that the Navy assess how much work it actually takes to run a ship, and use that to size the crew.

Maintenance is also taking longer and costing more. Ship deployments have often been extended. This causes ships to have more problems when they're brought in for maintenance. Shipyards have struggled to keep pace, for a number of reasons. Over the past few years, the lost operational days that's been created by the maintenance overruns have cost the Navy the equivalent of the presence of almost three surface ships per year. That, in turn, strains the remaining fleet, and it's an unsustainable, vicious cycle.

As you know, the Navy's not alone in its readiness challenges. That's why GAO recommended—and this committee has supported, the need for the development of department-wide readiness rebuilding plan that explicitly balances resources with demands, and is transparent about how long it will take to rebuild readiness, and what it will cost. I suggest you continue to insist that the Department provide you that plan.

Over the past 3 years, GAO has made 14 recommendations in all to the Department of Defense to help guide the Navy and the services toward improved readiness. As the Navy and DOD develop a roadmap, going forward, I sincerely hope they consider our recommendations to help guide them.

Mr. Chairman, thank you for having me here today, and I'm happy to take any questions you have.

Chairman MCCAIN. Thank you, Mr. Pendleton. I appreciate it—your testimony, but more importantly, I thank you for the important work that you do, which is incredibly important to this committee.

Secretary Spencer and Admiral Richardson, surface force readiness has degraded over the last 10 years. Surface chain of command has become complicated on the waterfront. There's a blurring of lines of authority and accountability. The growing backlog of off-ship repair requirements, a large, deep maintenance requirement that has not been adequately identified or resourced. The effort to derive efficiencies has overtaken our culture of effectiveness. The materiel condition of the surface force is well below acceptable levels to support reliable sustained operations at sea and preserve ships to their full service life expectancy. Ships home-ported overseas have limited training and maintenance, which results in difficulty keeping crews trained and ships maintained. Some ships

home-ported overseas have had consistently deferred maintenance, resulting in long-term degraded materiel condition. Without a sustainable operational schedule and comprehensive risk assessment for ships home-ported overseas, it will be difficult for the Navy to identify and mitigate risks. I could go on.

Mr. Secretary, do you agree that these statements ring true today?

Mr. SPENCER. I do, Senator.

Chairman MCCAIN. I agree with you. Unfortunately, these are findings from the Navy and GAO reports from 2010 to 2015. Many of the issues we're discussing today have been known to Navy leaders for years. How do we explain that, Admiral?

Admiral RICHARDSON. Senator, there is no explanation to reconcile those two observations. While clearly there is much more to be done, and these observations, you know, point to those—and I commend the work of Mr. Pendleton and the GAO, as well, to providing such sound recommendations—there has been, also, a—an effort to address those observations. We've not been sitting idle. While it's—clearly been insufficient to close the readiness and effectiveness gap, we have been making steady investments to respond to the indications that we've got in training and manpower and in maintenance. We'll remain committed to closing that gap, as well, and reconciling the difference between supply and demand.

Chairman MCCAIN. Well, I can't continue this much further without asking your assessment of the effect of sequestration on your ability to address these conditions that I've cited, which come from GAO and the Navy itself. What effect does sequestration—for example, we're now facing the same collision coming up with—as of 1 October—what effect does sequestration have in affecting these recommendations and situations, as described by the GAO and the Navy itself?

Mr. Secretary?

Mr. SPENCER. Senator, the impact of sequestration and continuing resolutions is deleterious. It's an impact on the Navy that is stunning. Having been asked to come and run a business—i.e., the Navy—as CEO of the Navy on the man, equip, train, and supply side of the equation, it's very disturbing. Just looking, today, to give you a feel, Senator, with the CR [continuing resolution] that's coming up, starting October 1, going through December 8th, the fleet will mitigate approximately $200 million of O&M shortfall over the next 69 days.

Chairman MCCAIN. That's operation and maintenance.

Mr. SPENCER. That is correct, I'm sorry.

Chairman MCCAIN. Okay, go ahead.

Mr. SPENCER. It's a tentative number. It's still in work. But, that's where we think it's coming from. The fleet will minimize the impact by incrementally funding or shortening periods of contracts, where possible. This will cause a degradation in the quality of work. The fleet will also delay consumables and phased replacement materiel, purchasing for ships, and this will impact, again, the quality and service and the operation of the ships. We have to do management of the funds resources we have. This is not solely a funds issue, but you asked about CR and the effects of sequestration. We are living them. They are untenable.

Chairman MCCAIN. Admiral?

Admiral RICHARDSON. Sir, if I could add to that. The effects of sequestration and continuing resolutions makes everything harder. Everything. As we face the continuing resolution before us now, in addition to what the Secretary said, we will be considering deferring or slipping 11 more ship maintenance availabilities. There are dozens of new projects that we won't be able to get started on. These are things that had—start to address some of these conditions that we've got.

Over the past 9 years now, as we review the data, the number of efficiency studies, effectiveness studies—they all result in a constant pressure to do more with less. It rarely results in an increase.

Having said that, sir, I maintain that this is an issue of command, and that, if you only give us one ship, it's our obligation to operate that ship safely and effectively. I do not—while that makes it harder, that is not—in no way an excuse for the performance that led to these four incidents.

Chairman MCCAIN. Mr. Pendleton, do you have anything?

Mr. PENDLETON. Yes. We heard about the impact of budget everywhere when we do our work. It's hard to pin it down exactly. There are examples in our reports of depot maintenance being deferred and furloughs, and postponed deployments, and ship fuel problems. I think it's a cumulative disruption, at this point. I think—what we judged, back last year, was, we are where we are and the Department, not just the Navy, needs a plan for going forward, in part to be able to articulate what's real and reasonable, going forward, sir.

Chairman MCCAIN. Thank you.

I'm very proud of the vote of confidence in Senate approval of the Defense Authorization Act, which was overwhelming and a source of pride to me, that all 27 members of this committee agreed on the legislation that was just approved overwhelmingly. I have to point out, there was an effort, by an amendment by Senator Cotton, to try to rectify this sequestration issue to some degree. I will not name individuals, but it was blocked from even being considered for a vote. That, to me, is—well, it's disgraceful.

Senator Reed.

Senator REED. Well, thank you, Mr. Chairman.

Admiral Richardson, you continue to come back, and I think approximately, to the issue of command, even though we all understand the fiscal and procedural and resource constraints that Navy has faced. But, the issue of command is played out in—not theoretically, but very practically. That's when a commander says, "I can't do this, because my ships is not ready." Have you, in your capacity, indicated to COCOMs [combatant commands] that you can't provide ships because not ready—has commanders of individual ships said, "I can't"—to the fleet—"I can't move, because my ships is not ready"?

Admiral RICHARDSON. Senator, as I've testified before, and you know very well, we don't meet more than 50 percent of the combatant commanders' demands, as it is, at least from a force-structure standpoint and—a combination of that is due to readiness. There have been times, where I've spoken with my subordinate commanders, where there is just insufficient time to get a force trained

and certified to meet a deployment date when we have to go back to the combatant commander and say, "You're going to have to wait."

Senator REED. With respect to the issue of command, when those tough calls are made by the commander, does that result in any kind of either formal or informal disparagement of the commander; that's——

Admiral RICHARDSON. If I could go down and give that commander a handshake and a medal, I would do that. This is exactly the type of honesty and transparency that we need to run a Navy that's safe and effective.

Senator REED. In the process, going forward, not only will you be attempting, I think, to analyze the issues, come up with resources, but also continue to stress the idea of commanders having the ultimate responsibility to determine the worthiness of their ship.

Admiral RICHARDSON. That'll be the absolute center of gravity of our effort, sir.

Senator REED. The—Mr. Pendleton and his colleagues have done some excellent work, and they point out that the certifications of a significant number of ships, particularly in the Pacific, are not adequate. Can you tell us what that certification means? Is that a good indication of the capability of the ship, or is that not?

Admiral RICHARDSON. This is an indication that we use, sir. This is our indication. It's either a good indication or it's a meaningless indication. I'd like to think that those certifications mean something. It—while Mr. Pendleton's report gets to some ratios—and I'll leave it to him to get to that math—I agree with his conclusion that, over the last 2 years, the number of certifications on our ships, particularly in the forward-deployed naval force in Japan, has dropped precipitously. That deserves our full attention. It should have been brought to our attention more urgently before now.

Senator REED. With respect to deployed forces, there seems to be a distinction between deployed forces and stateside forces, in terms of lots of things—repairs, refitting, resources, training. That is going to be a focus, I presume, of you and the Secretary's inquiries about what's the—why the disparity?

Admiral RICHARDSON. It certainly will be a focus of the comprehensive review, to take a look at the way we generate and certify readiness, compare it to the forces in the United States, the rotational forces that leave—deploy and come back, versus those forward-deployed forces that remain at a higher state of readiness in theater.

Senator REED. Admiral Richardson, over the last several years, the Navy—not the Navy alone, but all the military services—have attempted to quote/unquote "streamline training," make it more effective because of deployment schedules, because of the availability of personnel. Do you think that, in any way, contributed to the—these accidents, that these young people were, you know, hustled through, if you will, and not—without the same kind of opportunities that predecessors might have had to learn their jobs?

Admiral RICHARDSON. Sir, I'll tell you that it's too early to say if these had a specific impact on those incidents. Those investigations are still in progress. But, we are looking specifically at that.

You know, what is the climate with respect to the priority of training and certification, and does it always get given lower priority to operations and the need to go out and execute the mission? As Mr. Pendleton and the Secretary have hinted, that, when maintenance periods run long, that further pressurizes our operational time. Training gets—you know, is there a pattern to consistently box out training, particularly the training on the fundamentals? That's absolutely a focus of the investigations.

Senator REED. Thank you very much, gentlemen.

Thank you, Mr. Chairman.

Chairman MCCAIN. Senator Inhofe.

Senator INHOFE. Thank you, Mr. Chairman.

I chair the Readiness Subcommittee, and on February 8th, we had a readiness hearing. Admiral Moran was at that hearing. Now, keep in mind, that was February the 8th, and, of the four incidents we're talking about, all except the one on January 31st were since that hearing that we had, Secretary Spencer, at the readiness hearing. In fact, I look at your situation, that you've now been on the job for, what, 5 weeks, 6 weeks. I'll bet you wonder sometimes what you've gotten into. But, it's a tough, tough situation, and you're the kind of person that can try something new. I'm——

But, at this hearing, Moran testified that the Navy could only meet about 40 percent of its demand from the regional combatant commanders. We've heard the reaffirmation of that, which has been going on for a long time. We also heard the Navy is the smallest it's been in 99 years. He went on to say, "It's become clear to me that the Navy's overall readiness has reached its lowest level in many years. That is all due to the inconsistent, insufficient funding that does not match the demand for Navy forces due to global threat situations." So, we hear over and over again that the Navy is taking on more, and with less.

So, Secretary Spencer and Admiral Richardson, if the Navy is focused on ensuring the foreign deployed ships are ready, and recent history is our example, what shape would the rest of the fleet be, in terms of readiness? What shape are the rest of the non-forward-deployed in? How would you characterize that?

Admiral Richardson?

Admiral RICHARDSON. Sir, it has been our consistent priority to resource those forces that are forward deployed and that are going to deploy, and that the surge force, as we call them, those forces that are here in the continental United States that may be the next to deploy or they may be called to respond in a crisis to reinforce the forward-deployed forces, those are the ones that remain less ready than we need them to, to respond in the way that they need to.

This is where you do a lot of that basic training, right? The one thing that's unforgivable in these situations is time. You just cannot get back the time.

Senator INHOFE. Yeah.

Admiral RICHARDSON. So, the flying hours don't—you can't catch up, right? That time is gone. The steaming hours, all of those things that don't happen in basic training, it's very hard to recapture that, just in terms of developing the level of experience and sophistication.

Senator INHOFE. Okay. You've caused for—called for a comprehensive review and an operational pause. When did the operational pause start?

Admiral RICHARDSON. The operational pause started pretty much immediately after the collision of *John S. McCain.*

Senator INHOFE. Yeah. I know that the comprehensive review is still underway. Can you talk about anything that, perhaps during this pause, you might—any observations——

Admiral RICHARDSON. Senator, thank you. I did direct that operational pause, because, at that point, I needed to elevate this to a Navy-wide perspective so that, both the shore and afloat, we took some time to stop, take a break, and review our fundamentals to ensure that we are operating safely and effectively, and to correct any areas that required immediate attention.

In addition to that pause, the Seventh Fleet conducted a standdown to address navigation and seamanship basics. As a result of that, we've made a number of corrections—immediate actions, if you will. All—first of all, all waivers for certifications, the certification process has been elevated now to the four-star level at the Pacific Fleet commander. We are reviewing every single ship, ship by ship, to evaluate their materiel and operational readiness. That is being done both administratively to make sure that our certification process——

Senator INHOFE. Yeah.

Admiral RICHARDSON,—is good, and also with physical visits.

Senator INHOFE. Yeah.

Admiral RICHARDSON. The—we have also convinced a readiness-for-sea inspection on all of those ships, to inspect and assess watch-standard proficiency and materiel readiness.

Senator INHOFE. So, that pause has aided you in your comprehensive review.

Admiral RICHARDSON. Yes, sir. I mean, I have a list that I could go on and on, in terms of immediate actions, but we are not waiting for these longer-term comprehensive reviews to complete; we're taking that action now to ensure a margin of——

Senator INHOFE. Yeah.

Admiral RICHARDSON,—safety for——

Senator INHOFE. Thank you very much. Mr. Pendleton, your candid and, I think, alarming assessment of the whole situation is not a surprise. As you look over all the forewarned things that—I think the Chairman said in his opening statement, said, "We were warned," and I think we were. It does boil down to—I think it does—resources, and a lot of it—I think you would probably agree with that.

This is what I'd like to ask you to do. I have 14 things in the defense authorization bill that we just passed yesterday, and, assuming that we're able to keep these things in there, recognizing we have a conference to go, and other—appropriations and all that—I'd like to have you look at these 14 things, look at the problems that we're trying to address in this particular hearing, and give us your evaluation as to how these—any of these 14 things might resolve the problem in the long term and the short term. All right?

Mr. PENDLETON. We'll be happy to do that and provide it for the record.

Senator INHOFE. Thank you.

Chairman MCCAIN. Senator Shaheen.

Senator SHAHEEN. Thank you, Mr. Chairman.

Thank you all for being here today.

Cybersecurity, as we all know, is a growing concern as we become more reliant on electronic means for communication, for storage of data, for operation and day-to-day systems, and also for navigation and control systems. I understand that cyberexperts from the Tenth Fleet were sent out to Singapore to investigate electronic data onboard the USS *John McCain* to see if any cyberintrusions had taken place, and that Admiral Moran stated, last week, that future accident investigations will include cyber investigations to ensure that there's been no tampering.

Can you tell me—I guess this is for you, Admiral Richardson—what are we doing proactively to ensure the security of our navigation systems and our electronic systems?

Admiral RICHARDSON. Senator, just as you said, we did send an investigation team out to the *John S. McCain* to take a look at that. I got a report, an update on that, just this morning, and still no evidence of any kind of intrusion or tampering yet. We're continuing to investigate.

The Navy has been on a steady path to continue to harden ourselves to be prepared for operations in combat in the cyberdomain. That starts, first and foremost, like everything, with people and organizations. We've been steadily bringing in and training cyberexperts into our team. We stood up that Tenth Fleet as a response to that. We have technical authority at the—at SPAWAR [Space and Naval Systems Command], out in San Diego, and we've got an information warfare-type commander, just like all the other services, down in Hampton Roads, Virginia. We believe that we're organized properly. Those organizations are becoming manned, billets are being filled, and the training is being done.

We are doing a combination of things. Many of these measures require physical standards so that our systems are hardened against intrusion. We are certainly baking those in to new systems that we are bringing onboard. We are looking at hardening those legacy systems that we already own, to the greatest degree possible. A very fast-moving problem, a very dynamic problem. I'm not saying we're there yet, but we're giving it very high priority and resources.

Senator SHAHEEN. Well, thank you. I'm glad to hear that. Obviously, that's another area where resources are very important.

Senator McCain has talked about the problems of sequestration, which everyone on this committee knows very well. But, I wonder if you could talk, in detail, about the impact of continuing resolutions, budget cycle after budget cycle, and how they affect maintenance and training plans for ships, and are forward-deployed ships affected more than ships stateside, is there any correlation there?

Admiral RICHARDSON. Ma'am, as I said, we will prioritize our resources to those forces that are forward deployed and that will deploy forward. We will not leave those teams short of resources.

Having said that, the uncertainty that—well, actually—to not get a budget on time has become, actually, certain. We're certain that we're not going to get a budget in the first quarter.

Senator SHAHEEN. Which is a sad commentary——

Admiral RICHARDSON. Which is——

Senator SHAHEEN.—on the budget situation.

Admiral RICHARDSON. Behaviors have adapted. We don't put anything in—important in the first quarter of the year. We have to compete three out of four quarters of the game.

In addition to just to that fact, what happens is, you have to double your contracting. Right? You have to right a tiny little contract for the length of the continuing resolution, and then you have to write another one for the rest of the year. As you know, nothing new can start. We try not to schedule anything new in that first quarter.

The maintenance and training, those are the hardest things. As those—as the uncertainty, you know, injects itself, it is always that the things on the bubble are maintenance periods, particularly surface-ship maintenance periods. It is, you know, how many steaming hours am I going to get? How many flying hours am I going to get? $150-million-per-month shortfall, how do I manage that? These are the effects of continuing resolutions.

Mr. SPENCER. Senator, can I add to that context, if I——

Senator SHAHEEN. Please.

Mr. SPENCER.—if I may?

One of the things that you heard me testify, when I was first here for confirmation, was, we really have to get our hands on industrial science, which the most primary fundamental of that is the line of sight to your resources. As I'm out there speaking to our suppliers and our contractors, who are more than willing to work on our behalf, they cannot run their businesses when they don't have line of sight to commitment. That is critical.

Senator SHAHEEN. Certainly, that's something that I've heard from suppliers in New Hampshire, as well.

Thank you all.

Chairman MCCAIN. Senator Wicker.

Senator WICKER. Admiral Richardson, Mr. Pendleton said he doesn't know what caused these accidents. After the two reports come out, do you think we'll have a better idea and Mr. Pendleton will be——

Admiral RICHARDSON. We'll be crystal clear on that, sir.

Senator WICKER. Okay. When can we expect these reports?

Admiral RICHARDSON. The comprehensive review, I put a 60-day tether on that. That's——

Senator WICKER. Sixty days from today?

Admiral RICHARDSON. Sixty-day—it should complete in mid October—mid to late October.

Senator WICKER. Okay.

Admiral RICHARDSON. Secretary's strategic review will complete, nominally, 30 days after that. I do want to emphasize, that's an aggressive timeline. I want to get these answers now, but I also want to get these answers right. We'll evaluate to make sure that we're doing a complete assessment, and not just rushing to a partial assessment.

Senator WICKER. Okay. Now, you mentioned leadership, and particularly at the command level. Can you shed any more light on the two officers who were fired last week? The Navy mentioned a loss of confidence in their ability to command. Are you able to be more specific to the committee at this point about those two individuals?

Admiral RICHARDSON. Sir, if I could, I'd like to defer until the investigations are done, and then we can come forward with a full——

Senator WICKER. Okay. But—well, can you say, were those two individuals onboard either of those ships?

Admiral RICHARDSON. The two—the commodore and the strike-group commander were not onboard the ships.

Senator WICKER. They were not aboard the ships.

Admiral RICHARDSON. No, sir.

Senator WICKER. Okay. Well, now let—and certainly, the Chairman is correct, and witnesses are correct, about sequestration. My commendation to Senator Cotton for trying to solve this issue. I want to be his teammate on that. It's way past time that we address this issue.

We have a modernization issue, and we have the more immediate readiness issue. I think they're both tied together. Let me ask you—just continue with you, Admiral Richardson. We have a requirement for 355 ships in our fleet today, is that correct?

Admiral RICHARDSON. Sir, several studies—Navy studies, outside-the-Navy studies—have pointed to a fleet size around 355–360 ships.

Senator WICKER. You support that, do you not, Secretary Spencer?

Mr. SPENCER. Yes, I do.

Senator WICKER. Admiral, it's a fact that we're now asking 276 ships to answer the requirement that the—that a minimum of 355 ships would take.

Admiral RICHARDSON. This is the math behind the fact that we can only source about 40 percent of the world demand right now.

Senator WICKER. To the extent we're asking fewer ships to do the—a larger amount of work—to the extent that we've—that we reduced our fleet size by 20 percent since 9/11, it is a fact that the Navy is busier than ever, and that's got to affect readiness, as well as the longer-term modernization issue. Is that not correct?

Admiral RICHARDSON. Sir, we are maintaining essentially the same level of forward presence with that 20 percent—smaller fleet. That has resulted in some exceedingly long deployment lengths, as Chairman McCain pointed out. We've corrected that back down to about 7 months as a sustainable length. But, our ships have been run hard. They are spending more time in maintenance, and that pressurizes the operational time.

Having said that, again, I'd bring it back to the fundamental importance of command here, to monitor the readiness of your ships, your aircraft, your submarines, and to report when those——

Senator WICKER. Well, I appreciate your acknowledgment of that.

Let's just talk a little about training. Let me toss out the idea of incorporating more virtual training, simulator-based training, into the curriculum for deployed sailors. Are you considering incor-

porating more of this high-tech, high-fidelity—and simulators into regular training as a way to address that issue?

Admiral RICHARDSON. Sir, we've been on that path for some time. I'd love to take you around and show you some of the advanced simulators that we use, both ashore and at sea, to keep our skills——

Senator WICKER. So, we're where we need to be on that?

Admiral RICHARDSON. Well, we can always do more, and I will tell you that the technology is allowing us to get more and more realistic in the scenarios that we present to our sailors, and we're adopting that technology as fast as we can.

Senator WICKER. Finally, what about this issue of sleep deprivation? There have been some New York Times articles, and other publications, about pervasive sleep deprivation among sailors, particularly surface warfare officers standing watch. Do you think that's likely to be one of the reasons that we eventually get down to on this issue?

Admiral RICHARDSON. Sir, we're investigating that specific claim very, very closely. Many parts of our Navy have already mandated a 24-hour circadian rhythm watchstanding rotation, you know, to ensure that everybody gets sleep inside their natural circadian rhythm. Admiral Rowden, the—commander of Surface Forces, just recently issued—while it was recommended before, he now said it'll be mandatory. But, we're diving into that deeply.

Senator WICKER. Well, we await your further information, and thank you for your leadership.

Chairman MCCAIN. Admiral, is it true that some of our sailors are working 100-hour weeks?

Admiral RICHARDSON. Sir, I'll not deny that. The sailors are working very hard. We have been doing some workday type studies. We've got some, particularly in the DDGs [Guided Missile Destroyer], the cruisers, the *Arleigh Burke*-class destroyers, and we're starting to respond to that by supplementing the crews.

Chairman MCCAIN. Okay. But, I'd just point out, if we know that somebody's working a 100-hour workweek, I'm not sure we need a study.

Senator Hirono.

Senator HIRONO. Thank you, Mr. Chairman.

Admiral Richardson, you just said something really interesting, just now, that it is the responsibility of the commander to monitor the readiness of their ships to—readiness to deploy. So, are you saying that, if a commander says that his ship—his or her ship is not ready, will that result in nondeployment of that ship?

Admiral RICHARDSON. If we're aware that a ship is not certified and ready to deploy, that ship should not deploy.

Senator HIRONO. You're going to take that commander's assessment of it. Is that how it works in the chain of command?

Admiral RICHARDSON. There's also his immediate superior in command. There are several layers of people that are monitoring this. We don't put it all on the commanding officer of the ship.

Senator HIRONO. But, I think that's what you meant when you said that you would have to also change the culture? Because already you're only able to meet 40 percent of the combatant commander's request, so the culture issue is probably that everyone

wants to meet the demands for deployment, and so the culture needs to be changed. That's safety first. Is that what you meant when you said culture?

Admiral RICHARDSON. We completely agree with you, ma'am. We have a can-do culture. That's what we do. Nobody wants to raise their hand and say "I can't do the mission," but it's absolutely essential that, when those are the facts, we enable that report.

Senator HIRONO. So, now you're going to institute a can-do-with-safety-first culture.

Admiral RICHARDSON. Exactly.

Senator HIRONO. The Optimized Fleet Response Plan, the new fleet deployment and maintenance model, appears to be falling short. It leaves no margin for error and extended deployments. Maintenance backlogs and missed training evolutions appear to have become the norm and commonplace. While it is too early to identify the exact causes of the accidents, developing a more flexible and realistic plan should increase the ability to train and conduct maintenance, and lead to fewer accidents.

Admiral Richardson, is the Navy looking to update the plan, and how does the Navy intend to address this issue?

Admiral RICHARDSON. Ma'am, just to be very specific, the Optimized Fleet Response Plan (OFRP), is that plan by which we prepare—maintain and prepare and certify for deployment those forces based here in the United States. That is a flexible plan. There have been many times where I've had discussions with Admiral Davidson or Admiral Swift that we needed to accommodate a delay in maintenance. We extend the training period, and, if necessary, we deploy late. So, you can only compress it so much.

Senator HIRONO. So, you're making a distinction that OFRP is for those ships that are on the mainland, where the problem or many of the concerns arise with the forward-deployed ships. Is there an OFRP plan that doesn't leave much room for exigencies——

Admiral RICHARDSON. This is the observation——

Senator HIRONO.—with regard to——

Admiral RICHARDSON,—Mr. Pendleton and the GAO, that these—the way by which we generate and certify readiness in the forward-deployed naval forces is a bit different. We expect them to maintain an overall higher level of readiness, and so, they don't get as deep as of—maintenance out there. They get more continuous types of maintenance so that they can stay overall ready.

But, where we run into trouble is when the pyramid gets inverted. The first thing we should be doing is maintaining safe and effective certifications. Only with those done, and the maintenance properly done, can we expect to deploy effectively and execute the mission. What we're seeing is that, particularly for the forward-deployed force in Japan, that pyramid became inverted, mission became first, at the expense of the——

Senator HIRONO. So, what are you planning to change that situation?

Admiral RICHARDSON. So, this is the absolute specific focus of the comprehensive review, to dissect that and make adjustments.

Senator HIRONO. You noted in your testimony—and this may be a question that you can only respond to for the record, because I

am running out of time—in your testimony, you said that the Navy's subjected to budget pressures, to do more with less, operational pressures to put busy forces on station more quickly and more often, and schedule pressures to make adjustments to training and maintenance plans. You also noted that none of these can excuse the commanders from doing what they're supposed to do. But, of the three pressures you that identified in your testimony, which do you have the most control over? Budget pressure, operational pressure, schedule pressure—which do you have the most control over?

Admiral RICHARDSON. I would say the two that we have greater control over are operational and schedule pressure.

Senator HIRONO. So, I would be interested to know what you're doing with your control and operational and schedule pressures to address these concerns that have been raised in this hearing.

Admiral RICHARDSON. Yes, ma'am.

[The information referred to follows:]

Admiral RICHARDSON. The Optimized Fleet Response Plan (OFRP) is the Navy's primary tool to manage operational and schedule pressures for Continental United States (CONUS) and Hawaii-based ships. OFRP provides certain entitlements for depot maintenance, training, and certification in every cycle. To reassess these entitlements and identify areas for improvement, we are conducting comprehensive "Ready for Sea" assessments to determine the material and operational readiness for all Japan-based ships. We are developing a force generation model for ships based in Japan that addresses the increasing operational requirements, preserves sufficient maintenance and training time, and improves certification accomplishment. We have permanently established Naval Surface Group Western Pacific as an administrative headquarters responsible for maintaining, training, and certifying Japan-based ships, focusing on these responsibilities for operational commanders.

Senator HIRONO. Thank you.

Thank you, Mr. Chairman.

Chairman MCCAIN. Senator Cotton.

Senator COTTON. Thank you, gentlemen, for your testimony today.

My deepest condolences go to the family members and the fellow sailors of the men and women who were killed on both the *Fitzgerald* and *McCain*.

It's hard to imagine, no matter what your investigations ultimately prove, that at least some part of the fault will not lie with Congress and the steady erosion of budgetary support that we have provided the United States Navy and the entire military.

We have heard again this morning, from both sides of our aisle, complaints about the Budget Control Act of 2011, and specifically the automatic spending cuts known as sequestration. Well, we had a perfect chance to finally end those over the last week on the floor of the Senate. I offered an amendment, as Chairman McCain said, that would have eliminated those automatic spending cuts, not only on defense, but on domestic spending, as well. It's no secret that I think many of those domestic programs could tighten their belt a little bit, but I knew that we needed a bipartisan solution.

I think every member of this committee has called for that at one point or another, to include every Democrat, but we didn't even have a vote on the amendment, because Chuck Schumer, the Democratic leader, wanted more to leverage in budget negotiations later this year, and the Democrats in his caucus went along with

him. So, their complaints about sequestration fall somewhat on deaf ears.

Now, they will say that our amendment didn't also address the so-called mandatory sequester. But, let me point out, first, that that doesn't affect a single dime of benefits to Social Security or Medicare or veterans benefits, and, moreover, virtually every one of them has voted at least twice to extend the automatic sequester into the future, when they did not seem that troubled by it. Politics prevailed here.

Now, let me turn to the state of your sailors' training. Admiral Richardson, in the GAO report there are indications that, in the forward-deployed naval forces, you have sailors who have not achieved mission-critical certifications on things like seamanship, air warfare, ballistic missile defense, cryptography, electronic warfare, intelligent strike warfare, cruise missile tactical qualification, naval surface fire support, surface warfare, undersea warfare, and visual board, search, and seizure. Without trying to assess whether these failures—or these lack of certifications were behind the incidents with the *Fitzgerald* and the *McCain,* I assume that's something that you seek to address rapidly.

Admiral RICHARDSON. Yes, sir, absolutely.

Senator COTTON. To help the layman understand, these certifications would be akin, in the Army or the Marine Corps, to basic rifle qualifications. Is that right?

Admiral RICHARDSON. Senator, some of them are, so there's sort of a—two tiers to those certifications that you just described. Depending upon which one you named, it would break out into—some are just fundamental ship handling, navigation, safety, you know, how to operate your ship safely at sea, the fundamentals, if you will, and then some of them are much more higher-end, sophisticated warfighting requirements.

Senator COTTON. Are—the Navy is obviously a forward-deployed force that is always operating, even if it's not in an active zone of conflict; whereas, the Marine Corps or the Army deploys to places like Iraq and Afghanistan and then trains at places like Camp Lejeune and Fort Campbell. Are these certifications things that can occur onboard, or do they have to be off of a deployment cycle and occur back at their bases?

Admiral RICHARDSON. They can occur within that—particularly the—for the forward-deployed naval forces, they can occur in the course of maintaining yourself operational. You just have to dedicate the time to do the training and get the team onboard to do the certification.

Senator COTTON. Thank you.

We've also spoken some about discipline and accountability for officers, to include some petty officers who were found at fault. What is the status, if any, of potential awards of medals for those sailors who saved the lives of their fellow sailors?

Admiral RICHARDSON. Sir, I'll have to get back to you on the specifics, but, you're right, there was definitely heroic acts on both of those. I can get that back to you. It's certainly our intent to recognize heroism where it was seen.

[The information referred to follows:]

Admiral RICHARDSON. Results of the investigative process will determine those sailors to be nominated for awards as a result of their heroic actions. This will take some time to complete. Anticipate that several sailors would be nominated for the Navy/Marine Corps Achievement medal.

Senator COTTON. I hope so. You know, as you state in your written testimony, what the Navy does is inherently dangerous. I'd say that of all the Armed Forces, even when they're not in an active conflict in places like Iraq and Afghanistan. Certainly, great heroism was displayed.

One final question I want to ask the Secretary and the Chief. In studying the causes of these incidents, what steps, if any, has the Navy and the intelligence community taken to rule out the possibility of a deliberate act of a hostile power?

Mr. SPENCER. Senator, it's all underway in the reports, what we call the ongoing reports, the technical reports that are going on right now. You heard the CNO speak earlier that Admiral Tighe and her group in the Tenth Fleet, on the cyber side, are doing their reviews there. Intelligence is also looking at it. So, it is being discussed.

Senator COTTON. Thank you.

Anything to add, Admiral Richardson?

Admiral RICHARDSON. No, sir. Absolutely no stone unturned. We're looking at everything.

Senator COTTON. Thank you.

Senator REED [presiding]. On behalf of Chairman McCain, let me recognize Senator Kaine.

Senator KAINE. Thank you, Mr. Chair.

Thanks, to the witnesses.

Before we begin on the topic, I want to just comment on Senator Cotton's discussion about his amendment. I supported the amendment and was looking forward to voting for it. Others in my caucus felt the same way. You have a reason to be concerned. The only thing I would add to your concern is, there were a whole lot of amendments that the Democrats wanted to offer, and they were all cut off, too. So, you didn't get a vote—your not getting a vote was not because of people necessarily wanting to avoid the issue; it was wanting to have a robust amendment process. If everybody else's amendments were going to get kicked out, sadly, yours did, as well. I regret that it was.

Let me now focus on this topic. I want to acknowledge the sacrifice of the sailors who lost their lives in these instances. This is why we're here, and this is why we need answers. Particularly, those families from Virginia: Dakota Rigsby, Gary Rehm, Timothy Eckels, and Charles Finley, who were either from Virginia or had been stationed in Virginia. We need to acknowledge them.

Admiral Richardson, I talked to you yesterday about the seriousness of this investigation—the two investigations. I was Governor of Virginia when there was a horrible violent incident at Virginia Tech, and 32 people were killed by a deranged young guy who killed them. I went to Virginia Tech the day after the tragedy. I was told by the president of the university that they would empanel a panel to review what happened, and I said, "No, you're not going to empanel a panel. I'm going to put together a panel. I'm going to make sure the panel has experts who have no connec-

tion with Virginia Tech and who have no connection with any of those who were injured or wounded, and I'm going to ask them to tell me everything that went wrong and everything we can do to fix it." I was advised, by lawyers connected with the State, "Don't do that. It will give people a roadmap to bring a lawsuit. It will open up all kinds of pain for the State if you're candid and unsparing." I said, "I don't care about the lawsuit. People died. The only thing that we can do, sadly, is try to learn everything we can from what caused them to die so that we can reduce the chance that that happens to anybody else. So, we're going to get every answer, and we're going to be transparent and public about every answer, and then we're going to fix everything we can."

That's what we expect from the two investigations that are being done. They will be unsparing, they will get every answer, they will be transparent about every answer, and then we will work together with you to make sure we fix anything that needs to be done.

You've been asked questions about training. I was on a radio program this morning, just coincidentally, in Hampton Roads, mentioned this hearing, and, over the course of a 5-minute interview, the host said, "I just got a text from a sailor saying that training on seamanship is lax." By the end of the interview, said, "I've gotten five more texts basically saying similar things." I think this has been affected, certainly, by sequester and the reasons that we've discussed, but I want to ask about something else, and ask whether this is going to be part of the scope of the investigation.

My understanding was that, in 2003, the Navy changed the surface warfare officer basic training course. It was a 6-month classroom instruction, and they changed it to a strictly computer-based syllabus. More recently, they returned to a class-based syllabus that was only a 9-week course. Is that correct?

Admiral RICHARDSON. Sir, that is correct. Back in 2003, we stood down the Surface Warfare Officer School, at the division officer—the beginning level. We thought we could achieve the aim and train surface warfare officers, junior officers, with a computer-based approach combined with on-the-job training at sea. We found that that was woefully inadequate, have reversed—come out of that. It was sort of a two-step process to come out of it, but now our junior officers and surface warfare pipeline do begin with a basic division officer course which is 8 weeks long. It stresses fundamentals. It spends a tremendous amount of time on seamanship and navigation, lots of simulators, as Senator Wicker pointed out. About midway through their division officer tour, or between their two junior officer tours, there's an additional 8 weeks of more advanced training, still at the basic level, focused at the junior officer. But, those are—those have been put in place—the first one was put in place in 2012, second one in 2014.

Senator KAINE. I don't want to, obviously, predetermine what the results of the investigation will be, but I just want to make sure. Is the scope of that initial training—you know, 6 months, to online, to 8 or 9 or 12 weeks—is the scope of initial training going to be part of the investigation that's being done?

Admiral RICHARDSON. Specifically called out in the comprehensive review——

Senator KAINE. All right.

Admiral RICHARDSON,—to look at individual training and professional development.

Senator KAINE. If I could, one last question. There is a blog forum that is used for discussion, often by surface war—surface ship officers. It's called Commander Salamander. There was a notable blog entry, a resignation letter—an anonymous resignation letter that just came to my attention late last night. It was published in November 2008, and here is a portion of the letter, "The problem of checking the boxes, vice actually being a capable Navy, exists everywhere. Lessons learned and codifications of best practices have led the Navy to being a force focused on the checklist as the end state, vice actually capability. As one example," comma, "Afloat Training Group, ATG, does not care that a ship has a method to ensure safe navigation."

I would like to provide that as a—as an exhibit to my question and, again, just ask if early warnings like this will, in fact, be part of the scope of the investigation that is being conducted.

[The information referred to follows:]

Admiral RICHARDSON. Senator, no stone unturned. We will look at every indication we have and address that.

Admiral RICHARDSON. Senator, no stone unturned. We'll look at every indication we have, and address that.

Senator KAINE. Thank you.

Thank you, Mr. Chair.

Senator REED. Thank you, Senator Kaine.

For the benefit of all that are here, we have a vote ongoing, and that is why my colleagues have left. They are going to vote, and they will return.

With that, let me seize the opportunity to begin a second round, which hopefully will have only one questioner. But——

Admiral Richardson, I know the Navy has put together the Optimized Fleet Response Plan. That's the idealized way to schedule ships and to inform crews and to synchronize training. But, when it impacts against the reality of delays in many different ways, it doesn't seem to work. Are you looking, in this review, at that Optimized Fleet Response Plan and how useful it is today, or how it might be altered or changed?

Admiral RICHARDSON. Sir, we are. But, I would say that, I think the Optimized Fleet Response Plan has been somehow misunderstood to be a rigid, unresponsive thing. It's actually very fluid, and it's a—it's just a process by which we generate forces for deployment. For instance, if a maintenance period, let's say for the carrier, goes long, you know, the rest of the process will be adapted to accommodate that delay. If more training is required to get through the basic phase, we'll adjust. This is not a one-size-fits-all, "This is what we do, and nothing else." It's actually a pretty fluid plan. It tries to get the maintenance done, get the manning onboard early in the process, so those people that we train are actually the ones that we're going to deploy with. There's a sort of a crawl-walk-run approach to training. All that is adaptive to the circumstances on the ground.

I just wanted to try and make that impression——

Senator REED. Thank you.

Admiral RICHARDSON.—that there is room for flexibility within the OFRP to accommodate for change.

Senator REED. Thank you.

Mr. PENDLETON. Senator Reed, can I add something?

Senator REED. Mr. Pendleton, yes, please, and then I'll recognize Senator Ernst.

Mr. PENDLETON. Yeah. So, we looked at the Optimized Fleet Response Plan, and we looked at the Navy's plan for readiness rebuilding, and everything the Admiral said is—about it is true. There's really two things I'd want to leave with you. One, the Navy's plan for readiness recovery is predicated on the Optimized Fleet Response Plan, which is four words for "schedule." That's because that's what it is. Staying on time, that they—they're able to do that, and that's difficult when you have delays, or whatever.

The forward-deployed naval forces in Japan, part of the reason we made the recommendation that we made is, we didn't see a similar plan like that for those ships over there. There was not dedicated training time. There were not the things that we thought would be needed to be—create a sustainable situation.

Senator REED. Thank you.

Admiral RICHARDSON. Sir, if I could.

Senator REED. Yes, sir.

Admiral RICHARDSON. Mr. Pendleton has it exactly right, and so, if you look at the plan for forward-deployed naval forces, there is a dedicated time.

Senator REED. Right.

Admiral RICHARDSON. That's the plan. But, the GAO, rightfully, looked at execution data.

Senator REED. Yeah.

Admiral RICHARDSON. It's hard to determine adherence to that plan, because we just kind of prioritize getting out and executing the mission. The thing that would fall off is the dedicated training.

Senator REED. Thank you. Thank you both, gentlemen.

Senator Ernst, please.

Senator ERNST. Thank you, Senator Reed.

Gentlemen, thank you for being here today.

First, as well as a number of my colleagues has done, I want to express my sincerest condolences to the families of those that lost sailors in these very, very tragic incidents. My thoughts and prayers will continue to be with you through this difficult time.

Secretary Spencer, Admiral Richardson, and Mr. Pendleton, thank you for being here today. These are difficult topics that we're discussing, and I hope that we're able to really shed some light on what's going on, and truly do get to the bottom of this so it doesn't happen again.

Mr. Pendleton, I want to follow up about the 100 hours per week, as Senator McCain had asked earlier. The GAO report found that sailors were working more than 100 per week, leaving them little time for rest. I know we have that can-do attitude. Admiral, you have stated that already. I know many even of our operators in the Army, they want to fulfill a mission, they're not going to say no. But, it's obvious that this is detrimental to our readiness. Can you talk about how that excessive workload has the ability to not only

impact morale, recruitment, and retention, but also then the safety and well-being of the other sailors on those vessels?

Admiral RICHARDSON. I'll start, ma'am, and let Mr. Pendleton pile on.

There's no doubt that overworking a team, particularly over time, has an absolutely corrosive effect. We actually have specialists in this area, Dr. Nita Shattuck, at the Naval Postgraduate School, who has pointed out, in very clear terms, the need for getting sufficient sleep and getting rest in a—you know, a 24-hour rhythm to get the most effectiveness out of that sleep. If we go beyond that, there are measurable degradations in your decision-making and in your performance. We need to make sure that we adjust back. Surface forces just recently mandating, now, that they do their at-sea rotations consistent with these, you know, rest principles.

But, to the GAO's point, we also need to make sure that our in-port workload is examined. As I said, we just did this for the destroyers, and found that, while there are no extra skills that are required, the capacity in port sometimes exceeds our at-sea manning models, and so, we're making adjustments.

Senator ERNST. Thank you. Thank you, Admiral.

Mr. PENDLETON. So, everything the Admiral said, I think's very honest and reflects the situation out there. One thing I would mention to the committee is that, under the current criteria the Navy uses, that they expect the sailors to actually work 81 hours a week—70 hours on duty, and then 11 hours for the other things. So, it's a pretty grueling schedule programmed right in. I think what's happened, it's—this has snuck on them a little bit over time. It's the—because it takes more work to keep the ship running, and so, they end up with folks working 15—over 15 hours a day, on average.

I don't have a lot of specific work. I'm citing a Navy study. But, some of the folks sitting behind me, and they work with me, have done literally dozens of focus groups. I don't think that they didn't hear this in any single one. Everyone talked about the lack of sleep and the impact on them, and some of them said they wished for 100-hour week. So, I think it's pretty tough out there.

Senator ERNST. It is tough out there. One thing I would emphasize, though, that that is a commander's responsibility, is to make sure that they are able to react when the time calls for it. You know, as a lowly company commander running transportation operations, in combat operations we're only required 4 hours of sleep for our soldiers that are driving trucks. Of course, every one of them would say, "I can go 24 hours a day," but we know, as commanders, that you can't keep pushing our soldiers, sailors, marines, and airmen to the limit and expect them to operate efficiently and safely.

Mr. SPENCER. If I may, Senator, I'd be remiss if I didn't jump in here and address an issue that, when you hear about our studies, we're going to be coming back to you all to ask for some relief in certain areas. The secretariat, my office, the CNO, and the Commandant of the Marine Corps are reviewing instructions to make sure that we are focused on readiness and lethality, going forward. Those instructions that do not support readiness and lethality are

going to be questioned and/or asked to be reviewed by you all. It's what I call "the rucksack issue." The best intentions of the world are handed down by folks to say, "Can you add this? Can you add this?" Well, no one's taking anything out of the rucksack. That's what we need to address right now, and that's what's going on.

Senator ERNST. Absolutely. As my adjutant general in Iowa always said, it's "assume prudent risk." That's what we want to enable our commanders to do, is assume that prudent risk. However, sometimes it's not prudent, and we should reject that.

So, thank you very much, gentlemen.

Senator REED. On behalf of Chairman McCain, Senator Warren, please.

Senator WARREN. Thank you, Mr. Chairman.

I want to say to all of our Navy families who have lost loved ones, thank you for being here today. We grieve with you, and we owe you an explanation of what happened. I know our leadership feels the same way.

Admiral Richardson, in the last year, the Navy has had four incidents involving the loss of life or injury. In three of the four, the ships involved were home-ported overseas. In fact, all in the same port, in Japan. GAO found that the Navy counts ships home-ported overseas as being in, quote, "permanent deployment status" resulting in fewer training hours for sailors. In fact, in 2015, GAO found there were no dedicated training periods at all for ships home-ported in Japan. The Navy concurred with the GAO's recommendations, and reported that it had developed revised operational schedules. But, as recently as August—that's 2 years after the report, August of this year—Pacific Fleet officials told GAO that the revised schedules were, quote, "still under review."

Now, Admiral Richardson, 2 years is a long time. So, what's the holdup here?

Admiral RICHARDSON. No, there's no excuse for that. We're investigating how that gap opened up. There's nothing defensible I can say for that.

Senator WARREN. Okay. I assume we're going to find a way to close this——

Admiral RICHARDSON. We are.

Senator WARREN.—quickly now?

Admiral RICHARDSON. Absolutely.

Senator WARREN. So, let me just keep asking, though, about where things have gone wrong. At the time of their respective incidents, did the crews of the *Fitzgerald* and the *Antietam* and the *McCain* have up-to-date warfare certifications?

Admiral RICHARDSON. Ma'am, many of them did not.

Senator WARREN. Of the three, do you know how many had up-to-date——

Admiral RICHARDSON. Well——

Senator WARREN.—certifications?

Admiral RICHARDSON.—I can get you the exact number. There's a number of different certifications. I'll provide that exact number for the record.

[The information referred to follows:]

Admiral RICHARDSON. As of August 1st, the USS *Fitzgerald* held 7 of 12 Tier 1 certifications, to include navigation, and held no Tier 2 certification; USS *Antietam*

held 7 of 12 Tier 1 certifications including navigation, and 1 of 9 Tier 2 certifications; and USS *John S. McCain* held 11 of 12 Tier 1 certifications, to include navigation, and 4 of 10 Tier 2 certifications.

Admiral RICHARDSON. But, all three of them, because it was pervasive in the forward-deployed naval forces——

Senator WARREN. Do you know, offhand, what percentage of our overseas home-ported fleet currently has expired warfare certifications?

Admiral RICHARDSON. Just about every ship has some element of their certification expired. That can be managed. If it's one thing and—an advanced warfare mission, for instance, they just don't assign them to that mission. Where it becomes troublesome is that—if it becomes too many areas, and particularly in those areas that are directly related to safe and effective operation, the fundamentals.

Senator WARREN. Right.

Admiral RICHARDSON. That's when it becomes of great concern.

Senator WARREN. So, it—the GAO reported, just last month, that 37 percent of cruisers and destroyers home-ported in Japan had expired certifications in 2017. Does that sound about right to you?

Admiral RICHARDSON. I'll leave it to Mr. Pendleton to do the math, but that does sound about right.

Senator WARREN. Okay. So, let me just ask, Admiral Richardson, do you believe it's irresponsible to allow our sailors to deploy repeatedly on cruises without the training they need to ensure the safety of the ship and its crew?

Admiral RICHARDSON. Yeah, what had happened in those areas, ma'am, is that when the team out there was conscious that these certifications were expiring, and it's a bit like your driver's license expiring, it may not necessarily mean that you don't know how to drive anymore; it's just—you know, there's—that expire. However, we do need to recognize that those certifications mean something.

Senator WARREN. Yes.

Admiral RICHARDSON. They need to go back and recertify. What had happened instead is that they would do an evaluation, just like I discussed, and said, "Okay, well, the certification is expired. We're not going to get a time to get onboard and do the certification for some time, and so we'll do a discussion or an administrative review to extend that." That was called a risk mitigation plan. That became pretty pervasive. It was this, kind of, boiling-frog scenario that, over time, over the last 2 years, really, became acute.

To answer your question yes/no, yes, it is irresponsible. But, I just wanted to give you a sense for how that came about.

Senator WARREN. I appreciate that. What I'm hearing you say is that you're conducting a thorough review. This is not going to happen in the future.

Admiral RICHARDSON. We'll get this right.

Senator WARREN. Thank you.

Thank you, Mr. Chairman.

Chairman MCCAIN [presiding]. Senator Rounds.

Senator ROUNDS. Thank you, Mr. Chairman.

First, let me begin, as many of my colleagues have, in offering condolences to the family/friends of those who have lost their lives and those who have been injured. It's difficult to put ourselves into

your shoes. I just simply offer to you that, while we can't take away the pain that you feel, we'll most certainly keep you and your loved ones in our thoughts and in our prayers. It also means that, as this committee, we feel a real responsibility to try to share what happened, and not only that, but why.

I think both Senator Ernst and Senator Warren have hit on something here which is very important, which is, we talk about the manpower and the number of hours that these soldiers have been serving, and whether or not they've actually been able to do the training and so forth. Seems to be a consensus growing that we needed to have more resources available to do more training, to do the retraining, to allow these individuals to operate at as close to a peak efficiency as possible. That takes money, and it takes resources.

My question, to begin with, would be to Mr. Pendleton. Does the Navy have the ability to shift resources, if they were to be available, from programs involving modernization to readiness?

Mr. PENDLETON. That would be tough, there's a lot of fungibility within the operations and maintenance accounts. That's not my specialty. There's limits on the modernization. I probably should get the Admiral or someone to commend on that. I mean——

Senator ROUNDS. That would be fine.

Admiral RICHARDSON. Senator, a programming shift of that type would probably require us to come back to Congress with an above-threshold reprogramming request, and that would need to be adjudicated to make that happen, it's not easy.

Senator ROUNDS. The reason why I ask is that it seems to me that we're almost—it's almost like squeezing a balloon, in some cases. When we start talking about moving resources, even if we could move them, we're still talking about the limited resources brought about by sequestration and limited budgets that all of our Armed Forces are suffering with right now. If we take a look at the readiness side and the modernization side, we've got, just within the Navy itself, some of the best examples that we are going to continue to remind you of, our three nuclear-powered submarines that are sitting at dock, as opposed to being in depot, because we don't either have the depot space or the dollars in order to actually get them back up and operational. Billions of dollars in assets that are not at the ready. In fact, they're not even dive certified. You've got over 60 percent of your F/A–18s that need maintenance or that simply aren't operational at any given time.

So, this is a case of, even if we could move resources around, we have limited resources available throughout the different plans, not for upgrades, but just for maintaining the additional equipment, let alone coming back in and trying to find the additional manpower dollars so that we've got individuals who are on deployment that actually have the time to be trained, as well, in a perfect operating system.

Just curious whether or not—it is sequestration which is causing a lot of this, but I'd like each of you to please respond, if we could. Just how much of this problem that we've now seen is caused by a failure to properly fund the military in the first place with regards to not only modernization, but readiness, as well?

Mr. SPENCER. Senator, I'd like to dive in first, here. I want to carry on your analogy. It's not a balloon. Or, if it's a balloon, it's a balloon that is so pressurized, there's no movement. You squeeze it, it pops. That is the extent that I'd see it, coming at it from a business point of view. The funding balance-to-asset allocation here is way out of whack, and we have to get that back on track. There's other things we have to do, but, if we're addressing the financial resource side right now, there has to be some adjustments, because the balloon is at exploding pressure.

Senator ROUNDS. Admiral Richardson?

Admiral RICHARDSON. Sir, I think the Secretary characterized that completely accurately. There's not a lot of room to maneuver. You're really robbing Peter to pay Paul, as you pointed out, and when I think of what the navy the Nation needs, it's naval power, which is, yes, readiness, safety, effectiveness, first and foremost; it includes modernization, and it includes, you know, procurement, to make sure that we stay relevant into the future.

Senator ROUNDS. You took my ending quote away, Admiral. That's exactly the way that I was seeing this. But, I—let me end with this.

To the families that are out there, I know that our focus right now is on the leadership within the Navy and the commanders in the Navy and what they want to do about it. This goes deeper than that. This is a case of where the

United States Congress has to provide the adequate funding to take care of these young men and women who put themselves in harm's way every single day. We will not forget that.

Thank you, gentlemen.

Thank you, sir.

Chairman MCCAIN. Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

Thank you, to our witnesses here today.

Chairman MCCAIN. I just wanted to recognize that the Master Chief Petty Office of the Navy is here, also, Chief Giordano. Thank you for your leadership. Thank you for being here.

Senator Peters.

Senator PETERS. Thank you, Mr. Chairman.

Again, thank you, to our witnesses, for testifying on this very important issue.

I want to add my condolences to all of the families who lost loved ones in these very tragic accidents, as well. One of those sailors, who is from Michigan, Electronics Technician Third Class Kenneth Aaron Smith, our prayers and thoughts are with him, with his family, as all of the sailors who lost their lives.

Director Pendleton, I certainly appreciate your report and your testimony here today. I just have kind of a straightforward question, just to get some clarity as to priorities that we need to be thinking about, in order to avoid more of these incidents in the future. Just a question, if you traded places with either of the gentlemen who are sitting next to you, the Chief of Naval Operations or the Secretary of the Navy, in your mind what would be the first steps that you would take?

Mr. PENDLETON. You know, I think our recommendations lay out a pretty good roadmap. We thought about this a lot, back in 2015.

Specific to forward-deployed naval forces, I think you've got to make time for them to train. You've got to make space in the schedule for them to actually train and get those certifications. Those are—the trends and that's what's concerning.

The second—which I think the Navy's doing both these things now—is, you need to assess whether or not increasing reliance on overseas-based ships is the best call, because that comes at cost, and some of them may be hidden.

So, those would be the two things that I would focus on, specific to the Navy.

Senator PETERS. You mentioned, in your opening testimony, about a plan, the readiness plan, that we need to continue to demand that. Would you please elaborate on those comments?

Mr. PENDLETON. So, in—last year, in 2016, we looked at the readiness rebuilding plans of all the military services, including the Navy, as well as how the Department of Defense was overseeing it. We came away with the conclusion, not to put too fine a point on it, that they didn't have a comprehensive plan for how they were going to go forward. There was a lot of recognition of the problem, a lot of priority being assigned to it, but what we couldn't see was, if you put money in, how much readiness were you going to get out? There was also the question of how you were going to manage the demands.

So, what we suggested, hopefully was practical: What are your goals? In some cases, the goals weren't clear to us. You know, how are you—what are you—how much are you going to be able to get next year and the year after? What's it going to cost? How long is it going to take? Those kinds of things. Because our concern was, we would look up in 5 years and be in the same situation.

Senator PETERS. The concern that was expressed by Senator Ernst and I last year—in fact, we sent a letter to Secretary Mabus—concerned with individuals and the Navy's dependence on electronic devices for navigation. I know we don't know the reason for these incidents and the accidents, but sometimes over-reliance on electronics can lead to some problems. When you think about the warfare of the future, a conflict in a space, we could have—GPS systems could be compromised, communications systems could be compromised. All sorts of issues could be related to that. There is a sense that we need to make sure that we're training our sailors in good old-fashioned seamanship, which means navigating the old-fashioned way, with charts and other types of navigational aids that were done before electronics, and make sure that there are eyeballs out to the sea at all times, not just relying on the electronics.

Secretary Spencer and Admiral, if you could comment on how are we ensuring that our sailors continue to have their seamanship abilities and not relying on electronics? Particularly, my understanding is that ships with certified electronic navigation systems are not even required to have charts onboard. Is that something that we're looking at?

Mr. SPENCER. Senator, it's a great question. I was heartened, the other day when I was down at the Naval Academy and Admiral Carter did what he should do in his command to put the arm on me to find some more money for the Academy, but he was talking

specifically about the training that goes on with the yard boats, I believe—YPs, boats, where they actually—midshipmen go out and actually practice shipmanship in the reality, along with celestial navigation. We need to fund these things on a continual basis. It's easy to say, "These are things of the past. Why can't we kick them to the curb?" But, you bring up some very salient points about what happens when we're denied access to certain technologies.

That being said, I certainly don't want to shortchange the advances that we get from technology. Being a pilot, we're now bringing iPads into cockpits, and doing away with paper charts. There are risks there, but I believe what—the FAA has even come to the conclusion is, the technology benefits outweigh the risks.

Admiral RICHARDSON. Sir, if I could just pile onto that, it is really about reliability. If we are going to shift to an electronic-based system, part of that reliability is making sure that the operators understand the underlying principles of that display that they're getting, and they are ready to question the validity of that display when they—things don't look right. To understand whether it looks right or not, you've got to have the fundamental training in relative motion, navigation, et cetera. It's extremely important to make sure that we've got that in place. As the Secretary pointed out, we're instilling that at the Naval Academy. It'll be part of our comprehensive review, to make sure that we're continuing that in the Officer and Enlisted Development Programs.

Senator PETERS. Thank you, gentlemen. Appreciate it.

Chairman MCCAIN. Senator Tillis.

Senator TILLIS. Thank you, Mr. Chair.

Thank you, gentlemen, for being here.

To the family members, friends, and fellow sailors, I offer my condolences.

Admiral Richardson, Senator Cotton mentioned something I think's very important. He said you're going through the investigation to get into the root causes of the incidents we're discussing today. But, he made a very important point that I doubt seriously gets covered—and, Director Pendleton, this may be something for you, as well—and that's really actions or inaction by Congress that are some of the root causes to these problems. Does that ever really weigh into any of the investigations? In other words, you may find out that decisions were made that actually led up to the circumstances that happened on that ship, but it could have been something that could have been avoided if funding—if we had done our job right. Does that ever weigh into any of these investigations, or is that something that the GOA—GAO would ever look at?

Mr. PENDLETON. Probably not, in a microsense like that, but I will say that I think the way that plays out, actually, is in making choices of short-term versus long-term plans. If you look in our statement that we provided for the record, we show the Navy's plans to build ships kind of goes that way, and its personnel plan goes that way.

Senator TILLIS. Right.

Mr. PENDLETON. That's a straight out-year budget-projection problem, right?

Senator TILLIS. Yeah.

Mr. PENDLETON. You're trying to figure out how to squeeze a lot of military into a can that's not quite as big as they'd like it to be, and so, you see these kind of mismatches happen.

On the micro, not so much. It's usually hard to assess that out on it.

Senator TILLIS. Well, I think what we have to do is maybe take it up a notch and look at trend. Because the trends you're talking about, in terms of personnel and investments and ships and naval capabilities, are a direct result of what we either do or do not do up here. I think, sooner or later, we've got to start demonstrating that some of—Admiral Richardson's always here to say he's going to get the job done, but, at some point, because that balloon bursts, you simply can't get the job done.

Admiral Richardson? I do have some other questions that I'd like to get to fairly quickly.

Admiral RICHARDSON. Sir, the—our investigations really concentrate on what is within our span of control. We get the resources that you give us, and it's our responsibility, and the responsibility of command, to take those resources, operate safe and effectively.

Senator TILLIS. I expected the answer to that, at the level you're dealing with, with the incident, but we really have to get Congress to be more aware of how our actions or inactions are a root cause to some of these problems.

I want to ask some questions—we're going to submit several, probably, questions for the record, in my capacity as the Personnel Subcommittee Chair, but I want to go back, maybe, and ask the question—you know, being a captain—for a cruiser or a destroyer, I think is a relatively complex job. Would you agree with that, Admiral Richardson?

Admiral RICHARDSON. Yes, sir.

Senator TILLIS. Now—I think that Chair McCain mentioned his concern with, maybe we're getting more breadth and not enough depth as we're training up men and women to fill these roles. One question that I have, If you have the average length—assignment length for a CO [commanding officer] on each of these ships to be 1.8 years, and a commander to be 18 months, are we kind of tightening the length of time that we're actually giving these people an opportunity to get that depth of experience before they're put in a command role? Do you think that that's an okay thing, or something that we should look at?

Admiral RICHARDSON. Well, we need to make sure that we've got an adequate sea time, right? Really, time on the ship, operating, not only in command, but throughout their career, so that, by the time they get to command, they've got the experience and training required to have those instincts that will serve them so well in command. That pipeline is a part of this comprehensive review.

To be honest, sir, we look at that constantly. It's not like we're waking up, you know, from a long sleep, here. But, we need to give it a fresh look as part of the comprehensive review.

Senator TILLIS. But, if you've got an XO [executive officer] and a CO on the same ship, and sequential assignments, and then you've overlapping some of that, how does that help?

Admiral RICHARDSON. I'm not sure it does. So, this is a question that—a specific question that I have. This XO/CO fleet-up plan that we put in place for the surface Navy, I want to make sure we examine that closely.

Senator TILLIS. One other quick question. As I said, I've got a number that I'm going to submit for the record—but, do we have a surface warfare community retention problem?

Admiral RICHARDSON. There's nothing really that's been brought to my attention for the community, writ large. The exception would be nuclear-trained surface officers. That's a community under particular pressure that we watch very closely.

Senator TILLIS. It looked like the Center for Naval Analysis suggested that the demand may be outweighing the supply, so I was just trying to get to the root cause of why that is and whether or not retention was a part of it.

My time is expired. We'll submit a number of questions for the record.

Thank you.

Mr. SPENCER. Mr. Chairman, could I provide one more answer? Would that be possible?

Senator, addressing your question about staffing on the bridge, et cetera, and career advancement, one of the things you're going to see coming out of my study is exactly that. We're going to look at DOPMA [Defense Officer Personnel Management Act], we're going to look at joint service, we're going to look at any and all aspects, at the higher level, and that addresses exactly what you're talking about.

Chairman MCCAIN. Senator King.

Senator KING. Thank you, Mr. Chairman.

I—while in no way denigrating all the discussion that we've had today about staffing and training and adequacy and hours of work—I think all those are contributors, but I'm surprised—I want to turn to an entirely different subject. Every boat in the Gulf of Maine has a radar on it that tells us when there's another boat within a mile or 2 miles or 5 miles. An alarm goes off that shows up on your GPS. How in the world does a billion-dollar destroyer not know that there's a freighter closing in on it? I don't understand how this could possibly happen. I've talked to Maine lobstermen. They're scratching their heads. They can tell when there's a flock of seagulls off their bow.

Admiral RICHARDSON. Sir, got the same questions. It's very hard to understand, with the sophisticated systems onboard these warships, that we let a ship get in that close, to the point of collision, and so, that is a direct——

Senator KING. Not "a ship." Three ships. Three of these were collision with——

Admiral RICHARDSON. Right.

Senator KING.—with merchant vessels.

Admiral RICHARDSON. Yes, sir.

Senator KING. I mean, can you give me an answer, specifically? Aren't there radar systems——

Admiral RICHARDSON. There are.

Senator KING.—on these ships——

Admiral RICHARDSON. Yes, sir.

Senator KING.—that would detect anything within the range?

Admiral RICHARDSON. The primary—There's a primary and a backup radar that should detect those ships. There are systems that can alert you at a particular range, and so, we have to find out what happened.

Senator KING. Is there a black box on these ships, like there is on an aircraft, so we can determine what the sequence of events was?

Admiral RICHARDSON. We'll get to the sequence of events, yes, sir.

Senator KING. The second question is, Don't we have sailors on the bridge with binoculars——

Admiral RICHARDSON. We do.

Senator KING.—anymore?

Admiral RICHARDSON. It a requirement to have lookouts, and we have lookouts on the watch team on the bridge.

Senator KING. Is there—and the other question is about the radar of these ships that ran into us. Is there some technology that they couldn't see us? Are these—are we using a stealth technology that—anything you can answer in an open setting?

Admiral RICHARDSON. Sure. I mean, it's—wouldn't surprise anybody, I think, that we design our warships to have a lower radar cross-section. I mean, it's, in some, designed to be very low. Right? So, the—that degree of stealth makes us more effective, from a warfighting standpoint. But, that also imposes a burden, if you will, on the crew of that ship to understand that they are low-observable and that they may not be as easily seen as something that is as large as a destroyer. It'll have a radar cross-section of a ship that's much smaller.

Senator KING. Or if they're not in a conflict situation, to emit some kind of signal to a—to another——

Admiral RICHARDSON. That's been an immediate action, is that there is this Automatic Identification System, AIS, that the Secretary mentioned. We had, I think, a distorted perception of operational security that, if we kept that system secure—off in our—on our warships. One of the immediate actions following these incidents is that, particularly in heavily trafficked areas——

Senator KING. In trafficked areas, like——

Admiral RICHARDSON.—we're just going to turn it on.

Senator KING.—like Japan.

Admiral RICHARDSON. Then you can—right, you can look outside and see the ship, and so, it's not an operational security——

Senator KING. So, you can't report to us today any results of the investigation into what happened with the nonperformance——

Admiral RICHARDSON. Those——

Senator KING.—of the radar system.

Admiral RICHARDSON. Those specifics are forthcoming.

Senator KING. Forthcoming soon?

Admiral RICHARDSON. As soon as the investigations are complete, yes, sir.

Senator KING. All right.

Let me turn from this subject, for a moment, to maintenance. I think the testimony from our friend from the GAO was that the maintenance capacity is not adequate, and that, therefore, we have

ships that are in port too long, and that puts a strain on the ships that are left at sea. Is that accurate?

Admiral RICHARDSON. I think Mr. Pendleton painted that exact picture. The words he used were "vicious cycle," and I would agree. That's a good characteristic of that.

Senator KING. Because these ships are expensive, as you know, and anytime you have a capital object that's that expensive, Secretary Spencer, you know from your business experience, you want it operated. Do we need to be talking about increasing the capacity of the maintenance yards to cut down on that time off the ocean, if you will?

Admiral RICHARDSON. I'll go first. I think that there's no doubt that we could use the increased maintenance capacity. Right now, we are leveraging every ounce of capacity, I think, across the Nation, both public and private, to execute the maintenance that we need——

Senator KING. But, if we're doing—if we're executing on every ounce of capacity, and it's not adequate, sounds to me like we need more capacity.

Admiral RICHARDSON. We need more, yes, sir.

Senator KING. Is that in the plans anywhere? Is that in any submissions of budgetary priorities in the future?

Admiral RICHARDSON. One of the other reports that Mr. Pendleton just recently issued was a report on our shipyards, and so, how to increase the capacity through modernizing our shipyards. We work closely with the private sector to have these discussions all the time, in terms of: How do we increase that capacity, so, it's something that has our attention, yes, sir.

Senator KING. One final question on the technology. I would urge that a standard practice ought to be for these locational radar, that keep an eye on what's in the vicinity, that if there—(a) there should be an alarm, which I'm sure there is, and (b) it should ring in the captain's quarters if anything comes within whatever the set distance is. It's really unacceptable, in this day and age, with the technology that we have, to have something like this happen, regardless of the wider issues.

Admiral RICHARDSON. Now——

Senator KING. This is just unacceptable, from a—just a modern seamanship point of view, it seems to me.

Admiral RICHARDSON. Sir, I agree with you 100 percent. That's why I'm fighting the tendency to characterize this—I mean, certainly there are tearing-down forces that are broader. We've discussed many of those today. But, this will go to, you know, proper operation of your equipment, fundamentals of watchstanding. Those are the things that we have to look at.

Senator KING. Thank you.

Thank you, Mr. Chairman.

Senator REED [presiding]. On behalf of the Chairman, let me recognize Senator Donnelly.

Senator DONNELLY. Thank you, Mr. Chairman.

I want to join my colleagues in expressing my deepest condolences to the family and friends of the sailors we have lost in these incidents. We are grateful for the service, saddened by the loss. Extraordinary people.

Mr. Chairman, thank you for convening this hearing. Both our military leadership and Congress have roles to play to ensure this doesn't happen again.

Admiral, I just want to follow up on my colleague Senator King's questions. You mentioned that we'll get to the sequence of events and find out what happened. Do you have a timeframe for that? Because we saw a number of incidents, and the goal is, we want to do it faster right, but the faster we get the facts as to what happened, the better the opportunity is to not have it happen again.

Admiral RICHARDSON. Right. Senator, we're taking sort of a response along two timescales, if you will, sir, so we want to get the full investigation done with alacrity. We are doing that, and so, this fall, you know, timeframe, we'll get those complete. But, we're not waiting for those things to be done to act. There are a number of tactical immediate actions. I mentioned the Automatic Identification System. We're going to turn that on so that we're much more visible to other ships. Mandating that we perform both manual and electronic tracking of all other vessels that will come within 2-½ miles. We've got mandated commanding officer review and approval of the watchbills, the watchteams that will be doing that. So, there's a number of actions, my point being, that we are doing now to enhance the things that Senator King and you are talking about.

Senator DONNELLY. How many radar systems do you have on at a time? Are there——

Admiral RICHARDSON. There are——

Senator DONNELLY.—are there backups for——

Admiral RICHARDSON. For navigation and safety, two radar systems, a primary and a backup. Then there may be a third commercial radar that we use sometimes.

Senator DONNELLY. Were they working at the time of these incidents, on both ships?

Admiral RICHARDSON. Sir, I don't have those details, so we'll get to that.

Senator DONNELLY. Mr. Pendleton, in your statement, you identify a number of recommendations from past GAO reviews that the Navy has not yet implemented. Which do you consider the most urgent of those?

Mr. PENDLETON. I think—with respect to the forward-deployed naval forces, I think carving out dedicated training time for them is going to be very important. So, that's probably my number-one. When you look broader than that and begin to give a urgent, not necessarily since it needs to be done today, but the Navy needs to determine how many people it really needs and put on the ships, because 100-hour workweeks are not sustainable. So, those would be the two I identify for you.

Longer-term, I think the shipyards are going to be a real issue. We just issued the report that was mentioned. There needs to be a capital investment plan on the shipyards. We're going to run out of drydock space, and it's going to be hard to get out of this vicious cycle, sir.

Senator DONNELLY. Secretary Spencer, what do you look at as the most urgent things to implement right now?

Mr. SPENCER. I concur with training, but, when I put on my title 10 hat, I—we have to gear up on infrastructure. If we look at the maintenance cycles that we have here, if I'm not mistaken, Mr. Pendleton, our bill is $4.2 billion.

Mr. PENDLETON. I think it's actually $4.86, a little higher.

Mr. SPENCER. $4.86 billion to get our yards back in shape. We're going to have to do something to move that ball down the road.

Senator DONNELLY. Thank you.

Admiral, as has been mentioned, 100-hour workweeks are unsustainable. I know you have personal experience from your deployments that you've had. What are we doing right now to change that paradigm of 100-hour workweeks and helping those individuals who are shouldering that burden right now, who are out in the field doing the very, very best they can to keep our Nation safe?

Admiral RICHARDSON. So, now all—the surface force, the submarine force, and the aviators all have mandatory sleep requirements now in place. The surface force just recently made that mandatory. It was recommended before. So, that will—you know, that will mandate that at sea, and those watch rotations, that we get sufficient sleep and get out of this cycle.

The other thing is this—there is a cultural factor here, where, you're more dedicated, if you can go to the extra mile and stay awake. That's like pulling an all-nighter in college. I have two daughters in college, and, it's too common there as well. It's a combination of education and culture change to make sure that people are seeking this rest.

Senator DONNELLY. The last thing I want to ask is, as you do these investigations, very often, as I know you're aware of, the people who know the best as to how to fix it are the ones who are on the front line and who are right there on the ships or in the submarines. I want to know what we're doing to make sure we incorporate their ideas in how we move forward.

Admiral RICHARDSON. Yes, sir. It started with the operational pause. In my message for that, I mandated that those be small groups of sailors on the deck plate. Focus groups, I think, are the most effective way that I have seen to get after those types of concerns. It beats a poll or a survey or anything like that, and that'll be a fundamental part of our way going forward.

Senator DONNELLY. Thank you.

Mr. Chairman, thank you.

Senator REED. Thank you very much.

On behalf of Chairman McCain, Senator Sullivan, please.

Senator SULLIVAN. Thank you, Mr. Chairman.

Gentlemen, thank you for being here, and your testimony.

I also want to offer my condolences to the families. You know, this is just completely unacceptable, period. No debate about that. I don't think anyone's debating that. But, you know, when the men and women of our military do what less than 1 percent of Americans do in this country, which is raise your right hand to support and defend the Constitution and keep us safe, we've got do a better job, all of us—the Navy, the Marines, the Army, the Congress. It's unacceptable.

So, Admiral, I want you to know, I'm having a hard time with the—this issue, put us on the bridge of a modern Navy ship, and

talk about the redundancies—the radar, the GPS's, the physical watch. What—I mean, I know you're investigating this, but what does that look like? Aren't we the most advanced navy in the history of the world? And how are these, redundancies, in terms of basic seamanship in collisions at sea, breaking down, in your view? It's not just one, you know, sailor on the watch. There is a whole host of other things that would make sure we avoid these kind of collisions. What, in your experience—first, what does that look like? What, in your experience, do you think is going wrong, where—obviously there's a series of failures here in these collisions, not just one. What does that look like? How can we better understand it?

Admiral RICHARDSON. Right. Sir, my experience is, just as yours, that these catastrophes really result from the accumulation of a number of small errors that build up and line up eventually to create a sequence that results in a incident of this magnitude.

To put you on the bridge of a modern destroyer, a watch team will be on the order of ten people. About four of those will be officers—the officer of the deck, the junior officer of the deck, officer of the watch, conning officer. There will be two lookouts, there will be a quartermaster. There's plenty of people involved in the seamanship and navigation on the bridge. They're supported by a team in the Combat Information Center, which is also looking at electronic displays. They don't have windows, but they're backing them up.

With respect to the technology that this—the equipment for all of those critical systems—navigation, steering, propulsion—we have a primary and a backup system for every one of those. So, GPS is backed up by inertial navigators. We have a primary and a backup radar. For the rudders—we have two rudders, and each of those rudders has a primary and a backup hydraulic cylinder. There's a lot of redundancy built into these systems, because they are so fundamental to safety.

Now you get a sense—and it goes back to Senator Donnelly's question and Senator King's point, which is, how could all of that break down so catastrophically to result in a collision of this magnitude. That's why we have to do the thorough investigation.

Senator SULLIVAN. Let me ask another question. You know, it comes to readiness, it comes to training. One of the things, in my relatively short time here in the Senate, that I've been concerned about with regard to military readiness is that this committee, this Congress, well-intentioned, puts additional training requirements—additional training requirements, additional things that you need to address, because we told you. To be honest, most of those don't relate to combat readiness, most of them don't relate to basic MOS [Military Occupational Specialty], whether it's a surface warfare officer or a marine infantry officer and his, you know, duty to close with and destroy the enemy of our Nation. How much of your training do you believe is being mandated by the Congress that takes you away from your basic MOS training? If there are issues with that, we would certainly like to know about it.

Mr. SPENCER. Senator, let me address that for you.

Senator SULLIVAN. Do you think it's a problem?

Mr. SPENCER. It definitely is a problem. Not only will you hear from my report group as to any actions done at the Senate level or need to be adjusted here in this chamber or other chambers, you are going to hear from them. We're going to address DOPMA, we're going to address the Inouye amendment, we're going to address how joint chiefs task. We have given this committee an infinite rein literally to address everything. At the operational level, the secretariat, the OPNAV, the CMC [Commandant of the Marine Corps] are all going through their instructions, going, What are we focused on? We're focused on readiness and lethality. What do all our instructions support? If we find instructions that are not focusing us on those two items, we're going to bring them to your attention if you have control of them. If we have control of them, we're going to try to adjust this. It's the—it's as I said earlier, the rucksack issue. All the best-intentioned in the world, put a rock in to do a training on smoking cessation, put a rock in to do other sorts of training. No one's taking a rock out, and the rucksack's getting pretty damn heavy.

Senator SULLIVAN. Well, I couldn't agree more.

Admiral, I'm assuming you would agree with that. But, I implore you to bring those issues back to us, because we're—there's only so many hours in the day, and the mission of the Navy—you know what that mission is. We need to make sure our sailors are trained in the best way possible. This rucksack issue you're talking about—as a reservist, myself—in the Reserves, it's even worse, because there's less time in a year to train. So, please bring those back.

Again, my condolences to the families here. We need to fix this. I know you're committed to doing it. It's going to be an all-hands-on-deck effort. But, we cannot—cannot afford to lose any more of our Nation's finest in training accidents.

Thank you, Mr. Chairman.

Senator REED. Thank you very much.

On behalf of the Chairman, Senator Blumenthal, please.

Senator BLUMENTHAL. Thank you, Senator Reed.

Thank you all for being here today on a very difficult subject, especially for any of us from Connecticut. We lost two brave, courageous men, one on the *Fitzgerald*, the other on the *McCain*. I'd like to pay tribute to Electronics Technician Second Class Dustin Doyon and Sonar Technician Third Class Ngoc Truong Huynh, both from Connecticut. Their families mourn them, and all of us in Connecticut are struck by the sadness and grief of their passing and their courage in joining in devoting their lives to the defense of our Nation. We really owe them an investigation that's not only thorough and comprehensive, but also as prompt as possible.

I am struck by a number of the questions and answers that have been elicited so far, in dealing with this intensely human tragedy in such an abstract way, which maybe makes it easier to address. But, I think most Americans find these crashes incomprehensible.

So, let me begin by asking you, Admiral, Is there any indication, so far, that there was equipment failure on either the *Fitzgerald* or the *McCain?*

Admiral RICHARDSON. Sir, we're taking a look at all of that. That'll be part of the investigation. It's premature to say conclusively whether that contributed. But, it's not only the operating

status of the equipment, but how it was operated. Was it being operated properly, in accordance with the procedures? You know, all of these things will be part of the result of that investigative look.

Sir, I do also have to comment on how absolutely human this is to us. Every one of those sailors is like a son to me, and the opportunity to be with their families when they see them come back in these coffins makes it intensely human. We're going to get after this.

Senator BLUMENTHAL. By the way, I did not mean to imply that anybody on this panel, and particularly you, Admiral, who has devoted your life to the Navy and service and sacrifice, would feel anything but the most intense pain and grief as a result. Having a son who has served in the Navy, another in the Marine Corps, I know that, as a dad, I felt proud of the fact, not only that they were serving, but that they were surrounded by people who really cared for them. They were the best-trained and the most dedicated of any military force in the history of the world. Human error, as you've just pointed out, even with the best equipment, may result in failure to operate the equipment properly, which comes back to training.

I have been told that since 2006, the Navy doubled the number of ships home-ported overseas to 20, obviously to increase its forward presence and reduce crisis response time. But, training was eliminated on these forward-deployed platforms. As a result, the number of expired certifications increased fivefold, from 7 percent to 37 percent, between 2015 and 2017. Are those numbers accurate? I don't know whether they've been raised here before.

Mr. PENDLETON. Yeah, you're—most of that's coming from our work. The increase in overseas-based ships, I think, went from 20 to 40, which was about 7 percent of the Navy to 14 percent of the Navy. The certification numbers that you described, that is from 2015 January until mid this year. If you imagine—the 11 ships that are based in Japan, we looked at all the certification areas, 22 of them. When we looked at that in 2015—imagine a bunch of little squares—7 percent of those were red. When we came back, in preparation for this hearing, 37 percent of them were expired. Some of them, 2 years or more, and so, that was a trend that we alerted the Navy to and that we put in our updated work. For the most part, you have it right, but just wanted to make sure the specifics were——

With respect to training, what we said is, they didn't have dedicated training time, unlike the ships—based in the United States. So, before a ship deploys from the United States, it has a train-up period. The folks overseas were pretty much just almost always deployed. Is that fair?

Senator BLUMENTHAL. In terms of what—those numbers mean, 37 percent of those certifications were expired?

Mr. PENDLETON. Yeah.

Senator BLUMENTHAL. That means that——

Mr. PENDLETON. That means——

Senator BLUMENTHAL. Go ahead.

Mr. PENDLETON. Sorry. There's a——

Senator BLUMENTHAL. What does it mean?

Mr. PENDLETON.—periodicity to this. Every couple of years, or less, you have to be certified that you can do things: drive a ship, work your coms, everything—and in warfare areas, as well. So, that means that they had missed that certification time.

Senator BLUMENTHAL. Right. It doesn't necessarily mean that they were not competent to perform duties that they were doing, but it does reflect on the kind of training that was——

Mr. PENDLETON. The trend was of concern, as I think the Admiral has mentioned, as well.

Admiral RICHARDSON. I would just articulate that if that certification has meaning, then we've got to do the damn certification. We can't just walk by it and try and talk our way out, that, "Hey, we're still proficient, even though the certs expired." That's just not an acceptable way to do business.

Senator BLUMENTHAL. Well, not acceptable, I agree. Thirty-seven percent—and going from 7 percent to 37 percent in just 2 years is pretty staggering.

Admiral RICHARDSON. Egregious.

Senator BLUMENTHAL. Thank you.

Chairman MCCAIN [presiding]. Senator Sullivan wants to have another——

Senator SULLIVAN. Just two——

Chairman MCCAIN.—question.

Senator SULLIVAN.—two quick ones, Mr. Chairman. Thank you very much.

It was really a followup to Senator Blumenthal's question, which was the home port versus—the overseas-ported versus, kind of, CONUS [Continental United States] home-ported ship. The statistics that were just read, I think, are pretty striking. Admiral and Mr. Secretary, I know you're going to be looking at the specifics of these accidents and what specifically happened, but I think if you could also help address, kind of, the strategic elements—Is there something that we should be looking at that makes the overseas-ported—ships that are based overseas, going through different training, different deployment cycles—if you can help address that issue, too, because it does seem like that's something that might be an element of this challenge. Do you agree with that?

Mr. SPENCER. Yes, Senator. Two things that have, regrettably, come out of this, as far as I'm concerned. Mr. Pendleton hit on metrics. I'm a true believer in metrics. We have to know what we're measuring and what we're looking at. This is a prime example of, can we get ourselves a dashboard that is very easy for, quote/unquote, "management" to look at the dashboard and have the appropriate indicators on there at any one time? This is what we need to do. We don't need to actually be having our hands and fingers into what's going on there. We have to have the first indicators on when to react and say, "Uh-oh, trending in the wrong position, let's address."

If you look at the study that I have asked to be stood up, we are addressing the overall root causes of what's going on. The CNO is looking at tactical causes. We are going to be looking at root causes. We've asked people from BP [British Petroleum] North America to join us. They lived through the Deepwater Horizon tragedy and came out the other side with a very strong plan. We

called the Maritime Academy and said, "Who is your poster child for maritime safety who's had an issue?" They said, "Speak to Crowley Marine. They had a bit of a rash. They have a great program now, called Road to Zero." Called Tom Crowley. He said, "You're on it."

We looked at other situations that were out there. We called the Mayo Clinic. The Mayo Clinic has done 7 years of studies looking at high-pressure, team-oriented places. What they were looking at were operating rooms, where you had professionals—seven different teams of professionals, doing a lung transplant over a 7-hour period, and they degraded the whole thing, started over again, and said, "How do we build this for optimum outcome?" It came to such human behavior aspects as the anesthesiologist can go, "Need a minute here. Everyone stop. I need to stabilize something," and had input and control into a situation of pressure and intensity that had one leader, but they had to actually culturally realign how they communicate with everyone.

These are the kind of insights and people we're going to have working on our level to really see if we can have—we will have a plan to do corrective action.

Senator SULLIVAN. Great. Thank you.

Admiral RICHARDSON. Sir, if I could pile on.

There is a real benefit to having ships forward deployed.

Senator SULLIVAN. Oh, I couldn't agree more. Don't get me——

Admiral RICHARDSON. We need to——

Senator SULLIVAN.—wrong. I think it's actually critical that we have ships forward deployed.

Admiral RICHARDSON. For a number of reasons, that you're aware of. What we do need to do when we forward deploy ships, though, to Mr. Pendleton's point, is, we need to have a comprehensive understanding of what it takes to sustain that forward-deployed force from a maintenance, training, infrastructure standpoint, people, you know, the whole thing.

Senator SULLIVAN. Yes. That's just what I'm requesting you take a look at that issue, as well.

Thank you, Mr. Chairman.

Chairman MCCAIN. Well, let me just add. Admiral, I appreciate everything you're saying, but it doesn't take a study of RAND or Mayo when you're making people work 100 hours a week. Okay? It doesn't take any study. I don't have to ask RAND to look at it. I think I know what 100 hours a week does to people over time. That's been standard procedure for a long time. What are—why not declare a stop to—a halt to it right now? Right now. They should not be working 100 hours a week. So, I appreciate all our plans and all our remedies, but there are some of them that are just common sense, that don't require a study.

I think the men and women who are serving in the Navy would like to see some immediate action taken. Seven-month deployments are a long time. Up til now, there have been times where those deployments have been a lot longer than that. Who is looking out for them? Who's asking them to stay in?

I appreciate all the studies you've ordered, and all the assessments and all that. There are some that, all you have to do is use common sense and make some changes that would, obviously, re-

lieve some of the strain. When somebody's working 100 hours a week over a period of time, they're going to make mistakes. Any manager can tell you that.

Mr. Secretary, I'm glad you have all these plans. I'm glad you're going to make changes. I'm glad you've got RAND and whoever the hell else it is that's studying it. There are some aspects of what we're subjecting the men and women who are serving, especially in the overseas deployment ports, that you could change—you could make the change tomorrow. What we would like to see is some significant changes. Fire a few people, that's fine. But, I'm not sure it relieves that individual who's still working 100 hours a week. One of the reasons why that person is working 100 hours a week, obviously, is because the enormous burden that have been placed on them, not only to do their job, but also a lot of additional requirements that, every time there's been a problem, "Well, let's give another lecture, let's have another training session, let's have another test."

Again, I appreciate what you're saying, I appreciate what you're doing, but, I'd also like to see some immediate commonsense actions taken that—any manager, any leader will tell you that if you work somebody over 100 hours a week, you're not going to get an efficient output. There's many other aspects that are—of that are doing. If you deploy—if you keep deploying ships more than 7 months a year, you're not going to keep good people in the Navy. You're just not. They prefer a better life.

Finally, speak truth to power. One of the reasons why you are having to impose these burdens and the extended deployments and the lack of readiness is because of sequestration. When you don't know from—as you mentioned, when you don't know in September what you're going to be doing in October, that's not right, and it's not fair. So Admiral Richardson, I'd like to thank you for your very frank and candid comments on that issue before this committee.

I'd just like to finally say there are additional family members who are here, and I would recognized a group of them at the beginning, but I'd also like to thank them again, those who were not here at the beginning of the hearing. We thank you for your family's service and sacrifice. They will always be remembered. Your presence here renews and invigorates this committee's commitment to making sure that every single life of every single member of the United States Navy will be given the utmost protection and the utmost care and concern, and not allow situations to evolve that then make it likely that their lives are in greater danger.

I thank the witnesses.

Ask Senator Reed if he has any additional comments.

Senator REED. Mr. Chairman, I would simply join you in expressing profound condolences to the families, and also a profound commitment on behalf of the Congress and, I know, the Secretary and the CNO, to take the steps necessary to protect our men and women who wear the uniform of the United States.

Thank you, Mr. Chairman.

Chairman MCCAIN. Hearing is adjourned.

[Whereupon, at 12:21 p.m., the committee was adjourned.]

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JAMES INHOFE

SENATE NDAA NAVY PROVISIONS

1. Senator INHOFE. Mr. Pendleton, during my questioning in the hearing, I referenced 14 specific additions to the Navy budget, and asked that you assess what they will do to alleviate Navy readiness concerns in both the short and the long term. Please assess the overall impact to Navy readiness for the following provisions:

A. $1.4 billion for procuring 10 F–35C fighters, which is $800 million and 6 aircraft more than the administration's request

B. $25 billion for shipbuilding to fund 13 ships, which is $5 billion and 5 ships more than the administration's request

C. $5.5 billion for *Arleigh Burke*-class destroyers, which is $1.9 billion more than the administration's request, including funds for 1 additional destroyer and $300 million for multiyear economic order quantity procurement.

D. $3.1 billion for *Virginia*-class submarine advance procurement, which is $1.2 billion more than the administration's request, including $750 million for multiyear economic order quantity procurement and $450 million for either a third fiscal year 2020 *Virginia*-class submarine or initiatives to expand the submarine industrial base

E. $1 billion and incremental funding authority for either 1 amphibious ship replacement (LX(R)) or 1 amphibious transport dock (LPD–30), which is in addition to the administration's request.

F. $661 million for 1 expeditionary sea base (ESB), which is in addition to the administration's request.

G. $250 million for 1 cable ship, which is in addition to the administration's request.

H. $509 million for 8 ship-to-shore connectors (SSCs), which is $297 million and 5 SSCs more than the administration's request.

I. $30 million for preliminary design of a smaller aircraft carrier, which is in addition to the administration's request.

J. $1.9 billion for procuring 24 F/A–18 Super Hornets, which is $739 million and 10 aircraft more than the administration's request.

K. $2.3 billion for procuring 13 P–8A Poseidon aircraft, which $1.0 billion and 6 aircraft more than the administration's request.

L. Authorization for multiyear contract authority and advance procurement for up to 13 *Virginia*-class submarines.

M. Authorization for multiyear contract authority and advance procurement for up to 15 *Arleigh Burke*-class destroyers.

N. Codification that at least a 355-ship Navy with the optimal mix of ships is official U.S. policy

Mr. PENDLETON. GAO has not assessed the specific readiness implications of the listed additions to the Navy's budget. Our recent and pending reports include observations and recommendations that suggest that buying additional surface combatants, amphibious ships, support vessels, and submarines could expand the current fleet size and potentially improve readiness by relieving some operational tempo pressure. To achieve sustained readiness gains, these investments have to be balanced with the Navy taking action to overcome challenges related to adequately manning, operating, and maintaining the current fleet.[1] Without improved management, any force structure additions will likely experience similar readiness challenges as the current fleet.

Moreover, the Navy is unlikely to achieve its desired outcomes without improvements in the performance of individual shipbuilding programs. Within the shipbuilding portfolio, cost growth has contributed to the Navy buying ships at a lower rate than called for in its 30-year shipbuilding plans. Shipbuilding programs, such as the *Ford*-class aircraft carrier (CVN 78), *San Antonio*-class amphibious transport dock (LPD 17) and Littoral Combat Ship (LCS), progressed with unexecutable busi-

[1] For an overview of these challenges, see GAO, *Navy Readiness: Actions Needed to Address Persistent Maintenance, Training, and Other Challenges Affecting the Fleet,* GAO–17–809T (Washington, DC: Sept. 19, 2017) and GAO, *Navy Readiness: Actions Needed to Address Persistent Maintenance, Training, and Other Challenges Facing the Fleet,* GAO–17–798T (Washington, DC: Sept. 7, 2017).

ness cases in which ship construction began prior to demonstrating key knowledge, resulting in costly, time-consuming, and out-of-sequence work during construction and undesired capability tradeoffs.[2] The success of additional force structure and future programs, such as a smaller aircraft carrier, will depend on the execution of realistic business cases that balance desired requirements with available resources. The Navy's future readiness will also depend on the decisions it makes to mitigate the consequences of unexecutable business cases for its recent shipbuilding programs. For example, the Navy continues to acquire Littoral Combat Ships, which will represent a substantial portion of the Navy's fleet for decades to come. However, it is critical that the capabilities and sustainment of these ships—for which we have previously reported significant concerns—are sufficiently accounted for when making decisions on the future of the fleet.[3]

Further, the condition of newly constructed ships when they are delivered to the fleet has compromised fleet readiness. In our July 2017 report, we reviewed six ships of different classes valued at $6.3 billion and found that they were delivered to the Navy with varying degrees of incomplete work and quality problems.[4] Although the Navy resolved many defects after delivery, as the table below shows, quality problems persisted and work was incomplete when the Navy turned over the selected ships to the operational fleet.

Table: Number of Quality Problems or Defects at the Beginning and End of the Post-Delivery Period across Six Selected Ships

	At delivery	At the time the Navy provided the ship to the fleet
Significant construction deficiencies	363	45
Systems not meeting minimal functional standard	139	54
Significant deficiencies in mission-essential equipment	N/A[a]	53

Source: GAO analysis of Navy documents and data. GAO–17–418
[a] This information is not evaluated at delivery.

Moreover, fleet officials reported varying levels of concern with the overall quality and completeness of the ships, such as with unreliable equipment or a need for more intense maintenance than expected. Such issues contributed to a maintenance backlog at the start of the ships' service lives and put pressure on already constrained maintenance funding.

While we have not specifically examined the effect of additional F–35 procurements on Navy readiness, our preliminary work on F–35 sustainment across DOD indicates that accelerating procurements without addressing key sustainment challenges could result in further degraded readiness. Our preliminary findings, expected to be issued in a final report in late-October, show that DOD is currently sustaining over 250 F–35s and plans to triple the number of F–35s by 2021, but is facing sustainment challenges that are affecting warfighter readiness. For example, DOD's capabilities to repair F–35 parts at military depots are six years behind schedule, which has resulted in average part repair times of 172 days—twice the program's objective. In addition, spare parts shortages are degrading current F–35 readiness. From January through August 7, 2017, F–35 aircraft were unable to fly about 22 percent of the time due to parts shortages. These challenges are largely the result of sustainment plans that do not fully include key requirements or timely and sufficient funding. Our preliminary findings also show that DOD faces a funding shortage of approximately $1.5 billion between fiscal years 2018 and 2023 for F–35 sustainment. Procurement decisions can also significantly affect sustainment outcomes. Accelerating purchases of F–35 aircraft without addressing key

[2] See GAO, *Navy Shipbuilding: Policy Changes Needed to Improve the Post-Delivery Process and Ship Quality,* GAO–17–418 (Washington, DC: July 13, 2017) and GAO, *Defense Acquisitions: Assessments of Selected Weapons Programs,* GAO–16–329SP (Washington, DC: Mar. 31, 2016).

[3] See, for example, GAO, *Littoral Combat Ship and Frigate: Congress Faced with Critical Acquisition Decisions,* GAO–17–262T (Washington, DC: Dec. 1, 2016), GAO, *Littoral Combat Ship: Need to Address Fundamental Weaknesses in LCS and Frigate Acquisition Strategies,* GAO–16–356 (Washington, DC: June 9, 2016), and GAO, *Littoral Combat Ship: Deployment of USS Freedom Revealed Risks in Implementing Operational Concepts and Uncertain Costs,* GAO–14–447 (Washington, DC: July 8, 2014).

[4] GAO, *Navy Shipbuilding: Policy Changes Needed to Improve the Post-Delivery Process and Ship Quality,* GAO–17–418 (Washington, DC: July 13, 2017).

sustainment challenges would create more demand on the already-strained F–35 sustainment enterprise and puts the services at risk of purchasing aircraft that they are not ready to sustain.

QUESTIONS SUBMITTED BY SENATOR THOM TILLIS

DOPMA AND FLEET UP

2. Senator TILLIS. Admiral Richardson, in 2008, the Navy instituted a program called "Fleet Up," which means that officers serve as the XO and CO on the same ship in sequential assignments. The Center for Naval Analyses assessed the Fleet Up program and said the need for such a program "began with a substantial gap between control-grade inventory and control-grade manning requirements." Does this mean the Navy wasn't creating enough XO and CO opportunities to promote enough Commanders and Captains? If yes, why not?

Admiral RICHARDSON. No, it does not mean that we weren't creating enough executive officer and commanding officer opportunities to promote enough officers to the ranks of commander and captain. At the time of Fleet Up implementation, there was a concern within the Surface Warfare Community regarding future promotion opportunity to captain. There was, and continues to be, a delta between authorized billets and available inventory of those promoted to captain, but, as a whole, Navy promotes the best and fully qualified officers to each pay grade within control grade limits imposed by the Defense Officer Personnel Management Act (DOPMA). While promotion to captain was an initial driver for the Fleet Up study, it quickly became apparent to the Surface Force leadership that a readiness benefit might also be derived from Fleet Up. Under the legacy model, there was a commanding officer or executive officer relief every calendar year due to completion of prescribed tour lengths, typically 19–22 months for commanding officer and 12–14 months for executive officer. Fleet Up reduced that turnover rate, thereby increasing command stability for a longer period of time. The increase in command leadership stability and the perceived readiness benefits became the principal driver in the decision to continue Fleet Up. The Comprehensive Review (CR) of recent surface force incidents looked holistically at the surface warfare officer career path. The CR has made several recommendations that we will use to evaluate possible career path modifications.

3. Senator TILLIS. Admiral Richardson, in its report, CNA stated that the gaps were the result of general shortage of officers in control grades, but also due to "shortages in career-enhancing positions associated with high-probabilities of promotion selection." Is the proliferation of career broadening and staff assignments contributing to the growth of requirements for control-grade officers, particularly in post-command commanders?

Admiral RICHARDSON. In reviewing the data over the last fifteen years, there was no substantial increase in the number of career broadening and staff assignments for Unrestricted Line control grade officers. That said, changes in force structure and requirements continue to challenge Navy's ability to meet its goal of one-hundred percent of inventory in the control grades. Specifically, as fiscal constraints limit Navy's ability to build new platforms as well as maintain the current number of operational units thereby increasing the number of post-command commanders (PCCs), the ability to produce PCCs is limited. Because PCCs typically gain a wealth of expertise and experience having served in billets inside and outside of their community, they are highly desired for service in the most challenging assignments that require a wide range of capabilities. The ability to produce PCCs is constrained by a finite number of billets with command opportunity, therefore PCCs are detailed to the most critical billets where their expertise and experience is used for the greatest benefit to the Navy.

4. Senator TILLIS. Admiral Richardson, Fleet Up is essentially the same model used in Navy flying units. Did the Navy adequately consider the cultural differences between flying units and the surface warfare community prior to implementing Fleet Up?

Admiral RICHARDSON. Yes, we did consider cultural differences between aviation and surface warfare communities prior to implementing Fleet Up. We assessed the equities, as well as the pros and cons of the Fleet Up model, in the context of how it would impact the surface Navy. Specifically, we analyzed the effects of longevity during a given tour for both officer and ship. A 2014 Center for Naval Analyses study maintains that " . . . ships with longer-serving commanding officers had better

material readiness," and that tenure as executive officer would encourage the officer to take a longer view of policies put in place. While developing and implementing the Fleet Up model in the surface force, we made adjustments to the program informed by lessons learned provided through fleet feedback. The Comprehensive Review (CR) of recent surface force incidents looked holistically at the surface warfare officer career path. The CR has made several recommendations that we will use to evaluate possible career path modifications.

5. Senator TILLIS. Secretary Spencer and Admiral Richardson, according to the report, the due-course career path for a surface warfare officer is "a series of sea and shore assignments designed to provide the experiences needed to progress from Ensign to Captain in the Navy's closed, up-or-out personnel system." Does the "up-or-out" system force the Navy to rush the development of officers in certain technical specialties?

Secretary SPENCER and Admiral RICHARDSON. The up-or-out system does not force us to rush development of officers in certain technical specialties. Surface Warfare Officers are afforded two division officer tours to permit them to hone their skills, while preparing them to screen for their next career milestone—department head afloat. Officers also complete two department head afloat tours—and potentially post-department head at-sea tours—before screening for executive officer/commanding officer. Over the past decade, average sea time has increased by approximately five months for all officers who command ships, primarily due to the executive officer tour-length increasing from 13 months, prior to implementation of Fleet Up, to 18 months currently. The career path is designed to develop professional mariners and warfighters at sea. Performance in at-sea milestone tours is the most important factor in whether or not an officer screens for the next milestone. In between milestone tours, officers develop specialties vital to the programmatic and business side of the Navy, including financial management, operations analysis, manpower and education, strategy and planning, etc. The Comprehensive Review (CR) of recent surface force incidents looked holistically at the surface warfare officer career path. The CR has made several recommendations that we will use to evaluate possible career path modifications.

6. Senator TILLIS. Admiral Richardson, the Center for Naval Analyses stated that one possible negative result of the Fleet Up program is "tour start dates shifting to the right and command-screened officers are waiting to start their command assignments." This has in fact occurred and we're now seeing large sea gaps of 5 years or more in Fleet Up Destroyer captains. Do you believe the Fleet Up program has created a situation where surface warfare officers are spending too much time away from the waterfront?

Admiral RICHARDSON. In 2005, the surface community designed and approved the executive officer/commanding officer Fleet Up program, cognizant of the time officers would spend between their department head and executive officer assignments. When Fleet Up was implemented, by design, the notional time between department head tours and the start of the executive officer tour was 5.5 years. Since that time, the community has tracked and managed the average time between the end of second department head tour and the start of the executive officer tour to ensure the program has been maintained as designed and also to not disadvantage officers by having them away from the waterfront longer. The surface community constantly manages and adjusts officers' career-timing to meet their career needs, and the needs of the community based on the billets available on ships at sea. On the most recently approved Fleet Up slate, the average time between department head and executive officer tours was 5.38 years, while the average time throughout the tenure of the Fleet Up program has been 5.6 years. The Comprehensive Review (CR) of recent surface force incidents looked holistically at the surface warfare officer career path. The CR has made several recommendations that we will use to evaluate possible career path modifications.

7. Senator TILLIS. Admiral Richardson, could this lead to a loss of proficiency among the surface warfare community in the XO/CO ranks?

Admiral RICHARDSON. Unnecessary risk is unacceptable. For each expired certification, risk was managed through development of a Risk Assessment and Mitigation Plan (RAMP) that was approved by either the ship's Immediate Superior in Command (ISIC) or Commander, Naval Surface Forces Pacific (CNSP). The existing RAMP process, however, was biased towards operations and did not appropriately mitigate and balance the risk created by the high pace of operations (force employment) with force generation periodic training and certification requirements in the case of the Forward Deployed Naval Forces in Japan (FDNF–J). To correct this im-

balance, Commander U.S. Pacific Fleet cancelled all RAMPS, elevated RAMP approval from the ISIC/CNSP to his level, and directed the conduct of comprehensive readiness-for-sea assessments for every FDNF–J ship. ADM Swift has taken immediate corrective action which informed both the follow-on comprehensive and strategic reviews.

8. Senator TILLIS. Secretary Spencer and Admiral Richardson, do some of the requirements of DOPMA and other laws reduce your ability to flexibly manage your surface warfare officer population, especially when it comes to building sufficient levels of technical expertise?

Secretary SPENCER. Yes. Some statutes, including a number of those included in DOPMA, limit our ability to efficiently and effectively manage the officer corps. Notwithstanding such constraints, we have promulgated policies and manpower management strategies that provide surface warfare officers, and the entire officer corps, with sufficient levels of technical expertise and experience throughout their careers. While DOPMA provides a frame work to create a preeminent fighting force, it is over 35 years old. Our future success in competing for the best and brightest talent in America led us to embark on an effort to transform our human resources system to offer increased choice, flexibility, opportunity, and transparency. Congress has helped this effort by enacting a number of amendments to DOPMA and other personnel authorities, which has begun to move us in the right direction. We continue to evaluate the statutes under which we operate. We look forward to continuing the dialogue across DOD, and with the Congress, in a review of DOPMA/ROPMA and the pursuit of new or enhanced authorities that will meet the unique needs of each branch and component of the Armed Forces, while helping to sustain our position as the preeminent and most lethal fighting force in history.

Admiral RICHARDSON. Yes. Congress has already been, and continues to be, of great help in our efforts to thoroughly reevaluate DOPMA, and other personnel laws, in order to ensure we have the tools to effectively and efficiently manage the officer corps in a manner that enhances warfighting readiness. The Comprehensive Review of Recent Surface Forces Incidents specifically recommended an evaluation of the Surface Warfare Career Path, with particular emphasis on length of tours and currency of time at sea, which could identify a need for additional changes to DOPMA. As the need for additional changes are identified, we look forward to continuing the dialogue across DoD, and with the Congress, in pursuit of new or enhanced authorities that will meet the unique needs of each branch and component of the Armed Forces, while helping to sustain our position as the preeminent and most lethal fighting force in history.

9. Senator TILLIS. Secretary Spencer, does Congress need to help you and the other military services by reevaluating DOPMA and other related personnel laws in order to ensure our officers are managed in a way that allows them to focus on warfighting and gain sufficient levels of skill and experience?

Secretary SPENCER. Yes. Congress has already been, and continues to be, of great help in our efforts to thoroughly reevaluate DOPMA, and other personnel laws, in order to ensure we have the tools to effectively and efficiently manage the officer corps in a manner that enhances warfighting readiness. The Comprehensive Review of Recent Surface Forces Incidents specifically recommended an evaluation of the Surface Warfare Career Path, with particular emphasis on length of tours and currency of time at sea, which could identify a need for additional changes to DOPMA. As the need for additional changes are identified, we look forward to continuing the dialogue across DOD, and with the Congress, in pursuit of new or enhanced authorities that will meet the unique needs of each branch and component of the Armed Forces, while helping to sustain our position as the preeminent and most lethal fighting force in history.

QUESTIONS SUBMITTED BY SENATOR DAVID PERDUE

IMPACT OF BUDGET UNCERTAINTY, BUDGET CONTROL ACT CAPS, AND CONTINUING RESOLUTIONS

10. Senator PERDUE. Secretary Spencer and Admiral Richardson, can we meet our national security commitments if we do not address these serious issues of fixing the financial situation and improving budgetary certainty for the Navy?

Secretary SPENCER and Admiral RICHARDSON. No. There is a mismatch between the growing mission set that is emerging from the security environment and the sustainable level of naval power that we can generate with the funding available.

This risk manifests in readiness and global force management. In recent years, the Navy has only been able to meet 40–45 percent of COCOM demand for naval forces. The Comprehensive Review underscores the imbalance between the number of ships in the Navy today and the increasing number of operational missions assigned to them. The Navy can supply a finite amount of forces for operations from the combined force of ships operating from CONUS and based abroad; this finite supply is based both on the size of the force as well as the readiness funding available to man, train, equip and sustain that force. Headquarters are working to manage the imbalance. U.S. Navy ships homeported in the continental United States balance maintenance, training and availability for operations (deployments and/or surge); the Pacific Fleet is re-examining its ability to maintain this balance for ships based in Japan as well. Under the Budget Control Act of 2011 and extended Continuing Resolutions, the ability to supply forces to the full demand is—and will remain—limited.

11. Senator PERDUE. Secretary Spencer and Admiral Richardson, how does budget uncertainty, CRs and caps impact your ability to plan and spend wisely?

Secretary SPENCER and Admiral RICHARDSON. Budget uncertainty, continuing resolutions (CR), and sequestration-level funding caps add disruption, inefficiency and delays to our planning and execution of funding—delays that are becoming increasingly costly as we fall further and further behind the pace of available technology. We believe the past nine CR's have cost the Navy about $4 billion, not including opportunity cost or lesser imposed upon the industrial base. CR's limit our ability to supply forces to meet the growing demand of national security missions and impact the readiness of our forces and their equipment at a time when security threats are extraordinarily high. The longer the CR, the greater the consequences for our force. Budget uncertainty, CRs, and sequestration caps lead to deferred ship availabilities that disrupt maintenance and training schedules, and result in growth and new work in subsequent availabilities, increased costs, and inefficiency from sub-optimized work schedules—we cannot buy back lost time. They also can cause shipyards to lay-off employees and create future bills to the Navy due to unnecessary churn in the port-loading of our shipyards. Within our shipbuilding accounts, the impacts cause delays and churn for our already-besieged shipyards, requiring wasted time and effort to make adjustments and can result in new ships delivering late, and in turn current ships needing to operate longer, at great effort and expense. CRs also result in getting less for our dollar. We do not have authority to enter into new multi-year procurement contracts that allow us to negotiate lower unit costs. We pay higher prices for short-length services contracts. And we will have to spend more on overhead to write and review those agreements.

ACCEPTING RISK

12. Senator PERDUE. Secretary Spencer and Admiral Richardson, the GAO found that 37 percent of certifications for cruiser and destroyer crews based in Japan had expired—a fivefold increase since the GAO's May 2015 report. That's a fivefold increase on a previously identified problem in only two years. How much risk does the Navy believe is acceptable with regard to these outstanding GAO recommendations?

Secretary SPENCER and Admiral RICHARDSON. Unnecessary risk is unacceptable. For each expired certification, risk was managed through development of a Risk Assessment and Mitigation Plan (RAMP) that was approved by either the ship's Immediate Superior in Command (ISIC) or Commander, Naval Surface Forces Pacific (CNSP). The existing RAMP process, however, was biased towards operations and did not appropriately mitigate and balance the risk created by the high pace of operations (force employment) with force generation periodic training and certification requirements in the case of the Forward Deployed Naval Forces in Japan (FDNF–J). To correct this imbalance, Commander U.S. Pacific Fleet cancelled all RAMPS, elevated RAMP approval from the ISIC/CNSP to his level, and directed the conduct of comprehensive readiness-for-sea assessments for every FDNF–J ship. ADM Swift has taken immediate corrective action which informed both the follow-on comprehensive and strategic reviews.

NAVY—EXAMPLE OF BROADER DEFENSE PROBLEM

13. Senator PERDUE. Mr. Pendleton, throughout your work over the past 6 years, are you seeing any trends of systemic issues across services?

Mr. PENDLETON. Our work has shown that readiness challenges persist across a number of areas including, but not limited to, the Navy. In June 2017, we issued a report highlighting five key mission challenges facing the Department of Defense

(DOD).[5] In that report, we noted that the United States faces an extremely challenging national security environment at the same time that it is grappling with addressing an unsustainable long-term fiscal path caused by a structural imbalance between revenue and spending, with DOD accounting for approximately half of the federal government's discretionary spending. Within this environment, DOD is working to both rebuild the readiness of its forces and modernize to meet future threats while facing constrained budgets. Each of the military services today are generally smaller and less combat ready than they have been in many years, and, according to DOD, each military service has been forced to cut critical needs in areas such as training, maintenance, and modernization due to budgetary constraints.

In September 2016, we reported specifically on factors that affect reported readiness levels, DOD's efforts to manage the impact of deployments on readiness, and DOD's implementation and oversight of department-wide readiness rebuilding efforts.[6] We found that:

- The military services have reported persistently low readiness levels, which they have attributed to emerging and continued demands on their forces, reduced force structure, and increased frequency and length of deployments. For example, the Air Force experienced a 58 percent decrease in the number of fighter and bomber squadrons from 1991 to 2015 while maintaining a persistent level of demand from the combatant commands for the use of its forces. In addition, the Navy has experienced an 18 percent decrease in its fleet of ships since 1998 and an increase in demand, resulting in the deployment lengths for many ships increasing from 7 months to a less sustainable 9 months.
- DOD officials have indicated that overall demand has been decreasing since 2013, but the department has reported that the ability to rebuild capability and capacity is hindered by continued demand for some forces. To mitigate the impact of continued deployments on readiness, the Joint Staff has focused on balancing the distribution of forces for high-priority missions with the need to rebuild the readiness of the force. Efforts include revising major plans to better reflect what the current and planned force is expected to achieve and improving the management of DOD's process for sourcing global demands by, among other things, balancing the supply of forces with the minimum required to meet global demands. However, it is too soon to tell what impact implementation of these initiatives will have on DOD's readiness recovery efforts because the department is still working to complete implementation.
- DOD has stated that readiness rebuilding is a priority, but implementation and oversight of department-wide readiness rebuilding efforts have not fully included key elements of sound planning, putting the rebuilding efforts at risk. Key elements of sound planning for results-oriented outcomes include a mission statement supported by long-term goals, strategies for achieving the goals, metrics, and an evaluation plan to determine the appropriateness of the goals and effectiveness of implemented strategies. In 2014, DOD tasked the military services to develop plans for rebuilding readiness. Each service developed a plan based on the force elements that were experiencing a high pace of deployments or facing challenges in achieving readiness recovery. In 2015, the services reported their readiness rebuilding plans to DOD, which identified readiness goals and timeframes for achieving them, but these goals were incomplete and some of the timeframes have been extended. We found that the services have also not defined comprehensive strategies, with the resources required for achieving the identified goals, nor have they fully assessed the effect of external factors such as maintenance and training on readiness rebuilding goals. Moreover, the services have not fully established metrics that the department can use to oversee readiness rebuilding efforts and evaluate progress towards achieving the identified goals. Without DOD incorporating key elements of sound planning into recovery efforts, and amid competing priorities that the department must balance, successful implementation of readiness recovery plans may be at risk.

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[5] This included a detailed discussion of our priority recommendations to DOD. Since August 2015, we have identified priority recommendations in letters to the Secretary of Defense—recommendations that we have made to DOD that we believe the department should give a high priority to addressing. See GAO, *Department of Defense: Actions Needed to Address Five Key Mission Challenges,* GAO–17–369 (Washington, DC: June 13, 2017). As of June 2017, 78 priority recommendations remained open.

[6] GAO, *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan,* GAO–16–841 (Washington, DC: Sept. 7, 2016).

14. Senator PERDUE. Mr. Pendleton, in your view, do the problems you found in your recent reviews of the Navy incidents and the state of its shipyards, speak to a broader issue or problem within the Department of Defense?

Mr. PENDLETON. As we noted in our written statements, the Navy continues to face challenges with manning, training, and maintaining its existing fleet. In order to address these readiness problems, the Navy will need to implement GAO's recommendations—particularly in the areas of assessing the risks associated with overseas basing, reassessing sailor workload and the factors used to size ship crews, managing investments to modernize and improve the efficiency of the naval shipyards, and applying sound planning and sustained management attention to its readiness rebuilding efforts.

With respect to rebuilding readiness efforts, each of the military services and the Department has more work to do. We recommended in 2016 that DOD and the services establish comprehensive readiness goals, strategies for implementing them, and associated metrics that can be used to evaluate whether readiness recovery efforts are achieving intended outcomes.[7] DOD generally concurred with our recommendations and, in November 2016, issued limited guidance to the military services on rebuilding readiness; it has also started to design a framework to guide the military services in achieving readiness recovery but has not yet implemented our recommendations. For example, the Navy has since extended its time frame for readiness recovery to at least 2021, but it still has not developed specific benchmarks or interim goals for tracking and reporting on readiness recovery. Navy officials cited several challenges to rebuilding readiness, chief among them the continued high demand for its forces, the unpredictability of funding, and the current difficulty with beginning and completing ship maintenance on time.

Continued congressional oversight will be needed to ensure that the Navy demonstrates progress in addressing its maintenance, training, and other challenges and that DOD and the other military services address our recommendations.

READINESS—TIME CONSTRAINTS

15. Senator PERDUE. Admiral Richardson, these four incidents that occurred over the past 8 months led to unscheduled repairs and salvage times that took or will take these ships offline for a total of up to 3 years, and will cost more than half a billion dollars. What's the impact of unscheduled and lengthy repairs having on our ops tempo of the rest of the Navy fleet?

Admiral RICHARDSON. The loss of capacity due to these incidents will have an impact on operational tempo (OPTEMPO) in the short term. The Navy intends to meet its fiscal year (FY) 2018 global presence commitments and is adjusting schedules to do so. This involves surging a ship to the U.S. Central Command area of responsibility for its second deployment within the 36 month Optimized Fleet Response Plan (OFRP) cycle. This additional deployment will exceed an OPTEMPO of our service deploy to dwell (D2D) goal of 2:1, but will not violate Secretary of Defense's 1:1 D2D limit. This deployment demonstrates the flexibility of the OFRP force generation model. Beyond fiscal year 2018, the Navy will adjust its force offerings to reflect ship availability while the damaged ships are repaired.

16. Senator PERDUE. Admiral Richardson, will this have a domino effect on the rest of the fleet?

Admiral RICHARDSON. I would not characterize this as a domino effect. These incidents will not have an impact on the large majority of other warships. However, in a small number of cases, we will adjust deployment dates, locations, or both. This involves surging a ship to the U.S. Central Command area of responsibility for its second deployment within the 36 month Optimized Fleet Response Plan (OFRP) cycle. This additional deployment will exceed an OPTEMPO of our service deploy to dwell (D2D) goal of 2:1, but will not violate Secretary of Defense's 1:1 D2D limit. This deployment demonstrates the flexibility of the OFRP force generation model.

HOMEPORTING IN U.S. V. ABROAD

17. Senator PERDUE. Secretary Spencer and Admiral Richardson—can you give us the benefit of homeporting overseas? Especially from a posture and alliance reassurance perspective?

Secretary SPENCER and Admiral RICHARDSON. Credible combat power will remain postured in the Western Pacific and the Arabian Gulf/Indian Ocean to protect our vital interests, assure our allies and partners of our continuing commitment to re-

[7] GAO, *Military Readiness: DOD's Readiness Rebuilding Efforts May Be at Risk without a Comprehensive Plan,* GAO–16–841 (Washington, DC: Sept. 7, 2016).

gional security, and deter and dissuade potential adversaries and peer competitors. Homeporting ships overseas allows us to provide Geographic Combatant Commanders more presence with fewer ships, and this combat power can be selectively repositioned faster than forces homeported in the United States to meet contingencies that may arise elsewhere. Additionally, these forces are sized and postured to fulfill the following strategic imperatives: Limit regional conflict with forward deployed and decisive maritime power, deter a major power war, and win our Nation's wars. By being forward deployed and engaged in mutually beneficial relationships with regional and global partners, maritime forces are better equipped to promote frameworks that enhance security due to their ability to respond faster and remain on station longer. When natural or manmade disasters strike, our maritime forces provide humanitarian assistance and relief, joining with interagency and non-government partners. By participating routinely and predictably in cooperative activities, maritime forces are postured to support other joint or combined forces to mitigate and localize disruptions.

QUESTIONS SUBMITTED BY SENATOR CLAIRE MCCASKILL

TRAINING CERTIFICATIONS

18. Senator MCCASKILL. Secretary Spencer and Admiral Richardson, prior to the *Fitzgerald* and *McCain* incidents:

A. What was the waiver process for expired training certifications for the 7th Fleet? What was the minimum level a waiver could be approved? For the rest of the Navy?

Secretary SPENCER and Admiral RICHARDSON. There is no certification waiver process for the Naval Surface Force, nor for ships in Seventh Fleet. Certifications are either current or expired. Unique to Forward Deployed Naval Forces (FDNF), expired certifications were managed through a Risk Assessment and Mitigation Plan (RAMP) process that was approved by either the ship's Immediate Superior in Command (ISIC) or Commander, Naval Surface Forces Pacific (CNSP). RAMPs did not grant certification waivers, but documented a timeline to achieve certification status at a later date. Following the collisions of *Fitzgerald* and *McCain,* all RAMPS were cancelled and RAMP approval was elevated to the level of Commander, U.S. Pacific Fleet. Additionally, ADM Swift directed the conduct of Readiness-for-Sea assessments to review the training and material status of each ship to conduct underway operations. It is important to note that in the OFRP force generation model every ship will have expired certifications that are in the process of being reset as they progress from the Maintenance Phase through the Advanced Phase. Certifications are completed before deployment. As a hard and fast policy, Operational Commanders do not deploy ships with expired Certifications.

B. At what level were ship training certification statuses reported to?

Secretary SPENCER and Admiral RICHARDSON. Warfare Certifications are reported to both the numbered fleet commanders (either Commander, Seventh Fleet or Commander, Third Fleet) and to Type Commanders.

C. Were ship training certification statuses regularly reported to and known by senior Navy leadership at the Secretarial and CNO level? If not, why not?

Secretary SPENCER and Admiral RICHARDSON. Following the Fitzgerald and McCain incidents, COMPACFLT raised Risk Assessment and Mitigation Plan (RAMP) approval authority for a 7th Fleet ship with expired certifications to his level. This RAMP process is unique to 7th Fleet. There is no corresponding process for the rest of the Navy.

19. Senator MCCASKILL. Secretary Spencer and Admiral Richardson, following the *Fitzgerald* and *McCain* incidents:

A. Who is the waiver approval authority for a ship that has expired training certifications for 7th Fleet? Who is the waiver approval authority for the rest of the Navy? If it is not the Secretarial or CNO level, why not?

Secretary SPENCER and Admiral RICHARDSON. Following the *Fitzgerald* and *McCain* incidents, COMPACFLT raised Risk Assessment and Mitigation Plan (RAMP) approval authority for a 7th Fleet ship with expired certifications to his level. This RAMP process is unique to 7th Fleet. There is no corresponding process for the rest of the Navy.

B. What is the current status of training certifications for the 7th Fleet? What is the current status of training certifications for our other forward deployed fleets and ships?

Secretary SPENCER and Admiral RICHARDSON. Currently, 7th Fleet has four ships not undergoing maintenance availabilities and operational. One ship is executing a focused training and certification schedule and not available for operational tasking until she completes the required certifications. The other three ships are in various stages of completing their warfare certifications. One ship has been cleared and certified for limited, single mission tasking while the others have completed a majority of their certifications and are in the final stages of completing the remainder. COMPACFLT has not approved any certification waivers under the new readiness generation model, and ships will only be assigned missions in areas in which they are certified to operate.

C. What is the current status of training certifications for CONUS based ships?

Secretary SPENCER and Admiral RICHARDSON. Ships from CONUS are certified in all warfare areas prior to deployment to the standards delineated in COMNAVSURFPAC/COMNAVSURFLANT readiness policy (e.g., Surface Force Readiness Manual (SFRM) and Surface Force Exercise Manual (SFEM)). Certifications do not expire during deployment for operations and remain valid until the next maintenance period.

QUESTIONS SUBMITTED BY SENATOR MAZIE HIRONO

ASSESSMENT OF CURRENT READINESS

20. Senator HIRONO. Secretary Spencer and Admiral Richardson. Increases in operational tempo coupled with the limited number of ships and sailors likely lead to more deployments of longer duration which can result in decreased maintenance periods and reduced training time available for crews. Although the investigations have not been completed, it seems clear that these could be contributing factors for the various incidents. What is your assessment of readiness for our deployed naval forces? What are the trends in readiness since sequestration with the additional impacts of CR's and what is needed to remedy the situation?

Secretary SPENCER. What is your assessment of readiness for our deployed naval forces? All rotational naval forces deploy manned, trained, and equipped to effectively execute assigned tasking within required mission areas. Over the course of a deployment, assigned tasking specific to an area of responsibility (AOR) may be limited to a few mission areas, resulting in reduced opportunities to train and maintain proficiency within all other mission areas. Forward deployed naval forces (FDNF) may execute multiple deployments that focus on tasking within specific mission areas at the expense of extensive training in all mission areas. What are the trends in readiness since sequestration with the additional impacts of CR's and what is needed to remedy the situation? The impact of successive CRs on Navy readiness has been evident since 2009 in the form of degraded performance in our ship and aircraft depot maintenance facilities, deferred or truncated ship maintenance and modernization, underinvestment in both ship and aviation spare parts, underinvestment in training ranges as well as ordnance and manning shortfalls. Sequestration in 2013 exacerbated these readiness trends. While, in most years the Navy has received end of year funding to close urgent gaps created by the annual CRs, the unstable and unpredictable nature of this funding had a negative effect on numerous readiness enablers, directly resulting in truncated training periods to accommodate maintenance delays. These truncated training periods disrupted the professional development and quality of life of our sailors. Additionally, reduced training time and the absence of sufficient training ordnance significantly reduced opportunities for additional warfighting proficiency in training to the high end fight. What is needed to remedy the situation? Stable, predictable funding of the Navy readiness requirements as identified in the Navy's annual budget request.

Admiral RICHARDSON. There is no certification waiver process for the Naval Surface Force, nor for ships in Seventh Fleet. Certifications are either current or expired. Unique to Forward Deployed Naval Forces (FDNF), expired certifications were managed through a Risk Assessment and Mitigation Plan (RAMP) process that was approved by either the ship's Immediate Superior in Command (ISIC) or Commander, Naval Surface Forces Pacific (CNSP). RAMPs did not grant certification waivers, but documented a timeline to achieve certification status at a later date. Following the collisions of *Fitzgerald* and *McCain,* all RAMPS were cancelled and RAMP approval was elevated to the level of Commander, U.S. Pacific Fleet. Additionally, ADM Swift directed the conduct of Readiness-for-Sea assessments to review the training and material status of each ship to conduct underway operations. It is important to note that in the OFRP force generation model every ship will have expired certifications that are in the process of being reset as they progress from the

Maintenance Phase through the Advanced Phase. Certifications are completed before deployment. As a hard and fast policy, Operational Commanders do not deploy ships with expired Certifications.

Warfare Certifications are reported to both the numbered fleet commanders (either Commander, Seventh Fleet or Commander, Third Fleet) and to Type Commanders.

SWO TRAINING

21. Senator HIRONO. Secretary Spencer and Admiral Richardson. How has the training provided to Surface Warfare Officers (SWO's been modified over the past couple of decades? Do they have more time learning the basics, less? How has the amount of actual ship driving training time changed over the years? Are there changes to this type of training for SWO's in process or planned for the future independent of the recently started reviews?

Secretary SPENCER and Admiral RICHARDSON. How has the training provided to Surface Warfare Officers (SWOs) been modified over the past couple of decades? Before 2003, Division Officers received 16 weeks of instructor-led classroom instruction before reporting to their assigned ship. From 2003 to 2008, classroom instruction ceased with Division Officers completing Computer Based Training (CBT) modules after reporting to their ship. Both training models leveraged ship Personnel Qualification Standards (PQS) and on-the-job (OJT) training to qualify underway Junior Officers of the Deck (JOOD) and Officers of the Deck (OOD) as well as learn Division Officer duties. In 2008, Navy restored 3 weeks of classroom instruction for officers prior to reporting to their first ship. Training was increased again in 2012 and 2014 to what is now a 9-week Basic Division Officer Course (BDOC) for all prospective Division Officers. In 2014 an Advanced Division Officer Course (ADOC) (now 5 weeks) was established. Combined, this BDOC and ADOC 14-week training track makes substantial use of high-fidelity simulators, hands-on navigation labs, and instructor-led learning that exceeds training provided to past officers but still relies on ship PQS and OJT to train and qualify officers to stand underway JOOD and OOD watches and learn Division Officer duties. The results of Comprehensive Review (CR) will change SWO training. In addition to the above training, Navy is working to implement CR recommendations. Recommendations that affect SWO training include: evaluating the SWO career path from accession to major command including the scope and timing of formal training; improving seamanship, navigation and Operational Risk Management (ORM) individual skills training; upgrading current simulators to improve seamanship and navigation team training and certifications to include assessments in high shipping density, emergency and in extremis environments; providing additional fundamentals training for officers who qualified SWO without initial classroom training; and creating an objective, standardized assessment program to periodically assess individual seamanship and navigation skills over the course of a Surface Warfare Officer's career. Do they have more time learning the basics, less? Today, there is less time learning the basics (currently 14-weeks instead of 16-weeks prior to 2003). However, prior investments in simulators and other technologies enable faster learning. Implementation of the the CR recommendations will increase the length of training and will include additional investments in simulators and underway assessments enabling officers to learn the basics, develop the requisite Mariner skills to safely and effectively handle their ships and demonstrate the ability to do so in challenging and emergent circumstances. How has the amount of actual ship driving training time changed over the years? Division Officer tour lengths were increased in 1995, affording those officers more ship driving opportunities. There is a general consensus, however, that ship driving opportunities have decreased due to a declining number of ships, less dedicated at-sea training time, and a larger pool of officers competing for time on the bridge. The CR made several recommendations associated with officer training, qualifications, tour lengths, the tracking of watch standing proficiency and the means of continually assessing that proficiency throughout an officer's career. Example recommendations related to more driving time include: establishing a single, longer division officer tour as the standard, with allowances for specific billet requirements and emphasis in the first division officer tour on building proficiency, especially in seamanship and navigation; establishing policy to define, maintain, and re-establish SWO JOOD and OOD currency; and evaluating the use of Yard Patrol craft in all officer accession programs. Implementation of the CR recommendations will result in a measurable improvement in the quality of ship driving time. When combined with training and documented and demonstrated proficiency at key milestones, these recommendations will improve the mariner skills of all SWOs. Are there changes to this type of training for SWOs in process or planned for the future inde-

pendent of the recently started reviews? Yes, Navy was already planning for future training improvements independent of the Comprehensive Review (CR). Examples include: (1) providing Radar Navigation Team Training along with continued updates to shiphandling models and harbors, (2) expanding Voyage Management System training, (3) increasing celestial navigation and visual communications proficiency, and (4) providing additional heavy weather mooring and anchoring training. Now that the CR has been completed, all in-process training and future training revisions will be reassessed in accordance with its recommendations. While some of the CR recommendations can be made immediately, others will take time as they are dependent on significant simulator and facilities upgrades and additional instructors and assessors at the schoolhouse, waterfront and at-sea, all of which are being or will be implemented.

NATIONAL DEFENSE IN PACOM AOR

22. Senator HIRONO. Secretary Spencer and Admiral Richardson. The PACOM AOR has four of the five major threats to national security and North Korea continues to challenge international security through continued missile defense. With two Aegis ships involved in recent mishaps, is the Navy adequately postured to support the missile defense missions in the region? How will you fill the void especially with recent North Korean actions? What impact does this have on our relationship with allies in the region? Have you sensed concern on their part?

Secretary SPENCER and Admiral RICHARDSON. The U.S. Navy is inherently flexible and has several options to cover missions after the temporary loss of an operational asset. Seventh Fleet continues to meet current mission tasking in the Indo-Asia Pacific area of operations. If the work load were to exceed 7th Fleet capacity alone, 3rd Fleet ships that transit through or deploy to the 7th Fleet Area of Operations can provide support. If necessary, the potential always exists that U.S. Navy assets could be redeployed to the region from other parts of the globe. As an example, this month, the guided-missile cruiser USS *Monterey* (CG 61), which was in a surge status, was tasked to deploy from Norfolk Naval Station to the U.S. 5th Fleet and U.S. 6th Fleet areas of operations. This will enable the USS *O'Kane* (DDG 77), previously scheduled for CENTCOM deployment, to serve in the U.S. 7th Fleet area of operation.

Our routine presence reassures allies and enhances security and stability for all regional countries.

DECISIONS ON TRAINING

23. Senator HIRONO. Secretary Spencer and Admiral Richardson. GAO report (17–798T) revealed that there were no dedicated training periods built into the operational schedules of the cruisers and destroyers based in Japan and that the Navy used a "train on the margins" approach meaning crews trained while underway or in the limited time between underway periods; however, the Chairman of the Joint Chiefs of Staff testified before this committee that "the United States military will not compromise training or equipping of any troops going into harm's way." Whose decision was it to not include training into operational schedules? Was there an operational risk management evaluation done on reducing and essentially eliminating training for core competencies? If so, how was it determined that the Navy should accept this level of risk or at least mitigate it?

Secretary SPENCER and Admiral RICHARDSON. The previous Forward Deployed Naval Forces (FDNF) model was biased towards operations and, due to FDNF ships' operational tempo (OPTEMPO) and continuous tasking in support of national objectives, did not include periodic dedicated training windows. Training was accomplished in stride with operational tasking on a 24 month cycle. Following the *McCain* and *Fitzgerald* incidents, COMPACFLT established the Naval Surface Group Western Pacific (NSGWP) who will report directly to him in the near term, responsible for overseeing the training and certification of FDNF–J ships. This new organization is implementing a new FDNF force generation model with a dedicated training and certification period following maintenance availabilities, and will certify ships "ready for tasking" before they are deployed by operational commanders. NSGWP will provide a clear separation between force generation (training and maintenance) and force employment (operations). Although there may be three different periodicities / cycle length (e.g., CONUS 36 month, Japan 24 months, and Rota 32 months,) for training, every unit adheres to the same training and certification standards that are delineated in COMNAVSURFPAC/ COMNAVSURFLANT readiness policy (e.g., Surface Force Readiness Manual (SFRM) and Surface Force Exercise Manual (SFEM)). FDNF ships not certified in specific mission areas are not tasked in that area. PACFLT has not approved any waivers under the new read-

iness generation model. Ships will only be assigned missions in areas in which they are certified to operate.

108 HOUR WORK WEEK

24. Senator HIRONO. Secretary Spencer and Admiral Richardson. GAO report (17–798T) states that sailors were sometimes on duty for 108 hours during a one week period, exceeding their weekly on-duty allocation of 81 hours. This on-duty time included 90 hours of productive work. If the sailors worked for 7 days a week this would mean that each sailor was working over 15 hours a day every day of the week. How does something like this occur over an extended period of time? Before any study is complete, what is the Navy doing to ensure that this does not occur on a regular basis?

Secretary SPENCER and Admiral RICHARDSON. We are taking a hard look as to how to empower our Commanding Officers to better-manage the workday of the crew within a repeatable, sustainable, and predictable framework. The Naval Surface Forces staff has already reviewed instructions to determine what can be removed or minimized to reduce administrative burdens on the fleet. Additionally, Commander, Naval Surface Forces, Vice Adm. Rowden, has mandated the implementation of circadian rhythm shipboard watch rotations and daily routines by December 20, 2017. Circadian rhythm cycles provide our sailors with a predictable watch rotation and protected sleep periods that recognize the human circadian rhythm. It should be emphasized that the utilization of both circadian rhythm watch bills and complimentary shipboard routines are required to successfully manage fatigue. Many ships in the Fleet are already on a circadian rhythm cycle that allows for more rest between watches and enables a predictable and repeatable work/watch cycle.

PRESSURES ON THE SERVICE

25. Senator HIRONO. Admiral Richardson, in your testimony you identified that three pressures impact the Navy's readiness; those include: budget pressures, operational pressures, and schedule pressures. You additionally testified that the Navy has control over operational pressures and schedule pressures. How can you use the control that you have over operational pressures and schedule pressures to make improvements to readiness?

Admiral RICHARDSON. The Optimized Fleet Response Plan (OFRP) is the Navy's primary tool to manage operational and schedule pressures for Continental United States (CONUS) and Hawaii-based ships. OFRP provides certain entitlements for depot maintenance, training, and certification in every cycle. To reassess these entitlements and identify areas for improvement, we are conducting comprehensive "Ready for Sea" assessments to determine the material and operational readiness for all Japan-based ships. We are developing a force generation model for ships based in Japan that addresses the increasing operational requirements, preserves sufficient maintenance and training time, and improves certification accomplishment. We have permanently established Naval Surface Group Western Pacific as an administrative headquarters responsible for maintaining, training, and certifying Japan-based ships, focusing on these responsibilities for operational commanders.

QUESTIONS SUBMITTED BY SENATOR MARTIN HEINRICH

INSPECTIONS AND CERTIFICATION

26. Senator HEINRICH. Admiral Richardson, in January 2015, the GAO found that 7 percent of the warfare readiness certifications for cruiser and destroyer crews homeported in Japan had expired. Fast-forward to today, that number has jumped to 37 percent. Is the reason for that spike in expired certifications a failure to pass actual inspections OR is it because the Navy is simply not conducting inspections as often as it should?

Admiral RICHARDSON. The previous Forward Deployed Naval Forces (FDNF) model was biased towards operations and, due to FDNF ships' operational tempo (OPTEMPO) and continuous tasking in support of national objectives, did not include periodic dedicated training windows in which certifications could be completed. Training was accomplished in stride with operational tasking on a 24 month cycle. For each expired certification, risk was managed through development of a Risk Assessment and Mitigation Plan (RAMP) that was approved by either the ship's Immediate Superior in Command (ISIC) or Commander, Naval Surface Forces Pacific (CNSP). Because of OPTEMPO the process did not appropriately mitigate and balance the risk created by the high pace of operations (force employment) with

force generation periodic training and certification requirements in the case of the Forward Deployed Naval Forces in Japan (FDNF–J). To correct this imbalance, Commander U.S. Pacific Fleet cancelled all RAMPS, elevated RAMP approval from the ISIC/CNSP to his level, and directed the conduct of comprehensive readiness-for-sea assessments for every FDNF–J ship. ADM Swift has taken immediate corrective action which informed both the follow-on comprehensive and strategic.

27. Senator HEINRICH. Admiral Richardson, if the answer is the latter, what specifically is preventing these inspections from occurring?

Admiral RICHARDSON. The previous Forward Deployed Naval Forces (FDNF) model was biased towards operations and, due to FDNF ships' operational tempo (OPTEMPO) and continuous tasking in support of national objectives, did not include periodic dedicated training windows. Training was accomplished in stride with operational tasking on a 24 month cycle. Following the *McCain* and *Fitzgerald* incidents, COMPACFLT established the Naval Surface Group Western Pacific (NSGWP) who will report directly to him in the near term, responsible for overseeing the training and certification of FDNF–J ships. This new organization is implementing a new FDNF force generation model with a dedicated training and certification period following maintenance availabilities, and will certify ships "ready for tasking" before they are deployed by operational commanders.

28. Senator HEINRICH. Admiral Richardson, since January 2015, how many certification waivers were issued for cruiser and destroyer crews homeported in Japan?

Admiral RICHARDSON. There is no certification waiver process for the Naval Surface Force, including for ships in Seventh Fleet. Certifications are either current or expired. Unique to Forward Deployed Naval Forces (FDNF), expired certifications were managed through a Risk Assessment and Mitigation Plan (RAMP) process that was approved by either the ship's Immediate Superior in Command (ISIC) or Commander, Naval Surface Forces Pacific (CNSP). RAMPs did not grant certification waivers, but documented a timeline to achieve certification status at a later date. Since January 2015, 45 RAMPs were approved for cruisers and destroyers homeported in Japan.

29. Senator HEINRICH. Admiral Richardson, has the Navy determined the certification and waiver percentages for ships operating in COCOMS outside of PACOM, and if so, what are those percentages?

Admiral RICHARDSON. Certifications are never waived. Rather, if a certification is anticipated to expire, the ship is required to submit a "Risk Assessment and Mitigation Plan" (RAMP) to document this expiration, propose mitigating actions, and submit a plan for future certification. RAMP plans are approved by the Operational Commander. Below is a summary of all non-Forward Deployed Naval Forces (FDNF) certifications as of October 2017:

Atlantic:

a. Overall number of ships: 47 ships

b. Certificates expired: 199 mission areas expired
   101—Expired Due to Maintenance Phase
   88—Basic Phase
   10—Advanced/Integrated Phases
   0—Sustainment/Deployment Phases

c. Percent Expired: 21.5 percent expired

Pacific:

a. Overall number of ships: 49 ships (excluding LCS)

b. Certificates expired: 330 mission areas expired
   258—Expired Due to Maintenance Phase
   47—Basic Phase
   24—Advanced/Integrated Phases
   1—Sustainment/Deployment Phases

c. Percent expired: 31.3 percent expired

There is a critical point on this data that must be well understood before going forward. Without additional context, the percentage of expired certifications is misleading. All CONUS and Hawaii-based ships have their Certifications expire—by design—upon entering the Maintenance Phase. This deliberate reset of Certifications is to ensure a constant reevaluation of training per 36-month cycle—otherwise known as the Optimized Fleet Response Plan (OFRP). So while the numbers above are technically correct, the contextualized answer is stated below: Only one deployed ship from CONUS and Hawaii has an expired Certification; that is 1 Cert out of

2112 (96 ships times 22 Certs) As a hard and fast policy, Operational Commanders do not deploy ships with expired Certifications. All of the expired Certifications listed above on ships in the Advance/Integrated Phase still have time to complete this training, and we track each individual ship and their road to Certifications at the Flag Officer level. All of the Expired due to Maintenance Phase numbers listed above are a direct result of the resetting of Certifications when the ships are in the Maintenance Phase.

108 HOUR WORK WEEK

30. Senator HEINRICH. Secretary Spencer and Admiral Richardson, the Navy's finding that some sailors are on-duty as many as 108 hours a week is deeply concerning. If you do the math, that amount of work leaves barely enough hours to rest and recover, let alone sleep. Without a reasonable amount of rest and recovery time, performance and concentration can suffer, thus increasing the chances for a mistake. In light of the recent mishaps, do you believe the Navy's manpower requirements are still current, analytically based, and are meeting the needs of the existing and future surface fleet?

Secretary SPENCER and Admiral RICHARDSON. In 2014, Navy Personnel, Research, Science and Technology (NPRST), a former element of the Bureau of Naval Personnel, conducted an analysis of the Navy Standard Workweek, the planning factor used to convert work hours into manpower requirements during the Fleet Manpower Requirements Determination process. The preliminary data in the study was rejected due to lack of analytic rigor and small sample size. In May 2017, to ensure the analytical accuracy of Manpower Requirements Determination planning factors, my deputy for manpower, personnel, training and education, requested an independent analysis of the Navy Availability Factor to be conducted this fiscal year. The study will determine if the current components of the Navy Availability Factor remain appropriately defined to reflect the categories of time associated with the afloat-workweek. The Comprehensive Review of Recent Surface Force Incidents highlighted that a recent analysis of the Navy Standard Workweek identified the fact that typical on-duty hours exceeded the planning threshold factor. If the current components are not appropriately defined, the study will recommend revised time allowances to ensure our manpower model reflects the most current factors, and to improve the quality of manpower requirements for the current and future surface fleet. The Comprehensive Review also noted that we recently completed a related study on inport workload on DDG–51 class ships, which targeted 12 guided missile destroyers (DDGs) across five stateside homeports. The study captured current inport work and revealed that, overall, inport workload is less than at-sea for most ratings, although 10 ratings do have more work inport than while at sea. We are working to incorporate these inport requirements into updated afloat Ship Manpower Documents. We are also expanding our analysis to evaluate our Forward Deployed Naval Forces ships, those homeported overseas, and refining the inport model for use in future studies. It is ultimately each commander's responsibility to ensure their crew is well-trained and rested. Many variables, including emergent schedule changes, equipment malfunctions, and real-world events, impact the number of hours sailors work and rest. We must, at every level of decision-making, be cognizant of the potential risks associated with executing a workweek that exceeds standard workweek parameters and reasonable expectations of what we should require of our sailors.

31. Senator HEINRICH. Secretary Spencer and Admiral Richardson, if not, what will you change from a manpower requirements standpoint in order to meet the needs of the existing and future surface fleet, and what resources and/or authorities do you need from congress?

Secretary SPENCER and Admiral RICHARDSON. In 2014, Navy Personnel, Research, Science and Technology (NPRST), a former element of the Bureau of Naval Personnel, conducted an analysis of the Navy Standard Workweek, the planning factor used to convert work hours into manpower requirements during Fleet Manpower Requirements Determination. The preliminary data in the study was rejected due to lack of analytic rigor and small sample size. In May 2017, to ensure the analytical accuracy of Manpower Requirements Determination planning factors, my deputy for manpower, personnel, training and education, requested an independent analysis of the Navy Availability Factor to be conducted this fiscal year. The study will determine if the current components of the Navy Availability Factor remain appropriately defined to reflect the categories of time associated with the afloat-workweek. As reflected in the Comprehensive Review of Recent Surface Force Incidents a recent analysis of the Navy Standard Workweek identified the fact that typical

on-duty hours exceeded the planning threshold factor. If the current components are not appropriately defined, the study will recommend revised time allowances to ensure our manpower model reflects the most current factors, and to improve the quality of manpower requirements for the current and future surface fleet. The Comprehensive Review also noted that we recently completed a related study on inport workload on DDG–51 class ships, which targeted 12 guided missile destroyers (DDGs) across five stateside homeports. The study captured current inport work and revealed that, overall, inport workload is less than at-sea for most ratings, although 10 ratings do have more work inport than while at sea. We are working to incorporate these inport requirements into updated afloat Ship Manpower Documents. We are also expanding our analysis to evaluate our Forward Deployed Naval Forces ships, those homeported overseas, and refining the inport model for use in future studies. Based on the results of our reviews, we will assess the sufficiency of current resources, and will request assistance from Congress if additional resources or new authorities are needed.

QUESTIONS SUBMITTED BY SENATOR ELIZABETH WARREN

WORKWEEK STANDARDS

32. Senator WARREN. Admiral Richardson, GAO has reported that the Navy uses a workweek standard that "does not reflect the actual time sailors spend working," including their responsibilities while in port. In fact, the Navy's own study in 2014 found that sailors were on duty 108 hours a week, reducing the time available for rest. The Navy study found that could encourage a "poor safety culture." Do you agree with the conclusions of the Navy's study?

Admiral RICHARDSON. In 2014, Navy Personnel, Research, Science and Technology (NPRST) conducted an analysis of the Navy Standard Workweek that provided preliminary findings that some sailors reported they were working over 100 hours a week. Due to the lack of analytic rigor, small sample size, and incomplete nature of the study Navy deferred any policy decision. In May 2017, Navy initiated a request for a more rigorous and fully independent study of the Navy's workweek policy. The Comprehensive Review of Recent Surface Force Incidents highlighted that a recent analysis of the Navy Standard Workweek identified the fact that typical on-duty hours exceeded the planning threshold factor. If the current components are not appropriately defined, the study will recommend revised time allowances to ensure our manpower model reflects the most current factors, and to improve the quality of manpower requirements for the current and future surface fleet. The Comprehensive Review also noted that we recently completed a study of inport workload on DDG–51 class ships, which targeted 12 guided missile destroyers (DDGs) across five stateside homeports. We are working to incorporate these inport requirements into updated afloat Ship Manpower Documents. We are also expanding our analysis to evaluate our Forward Deployed Naval Forces ships, those homeported overseas, and refining the inport model for use in future studies. It is ultimately each commander's responsibility to ensure their crew is well trained and rested. Many variables including emergent schedule changes, equipment malfunctions, and real-world events impact the number of hours sailors work and rest. We must, at every level of decision making, be cognizant of the potential risks associated with executing a workweek that exceeds standard workweek parameters and reasonable expectations of what we should require of our sailors.

33. Senator WARREN. Admiral Richardson, what changes or process improvements has the Navy made to address this issue and limit the hours worked by sailors while deployed or in port?

Admiral RICHARDSON. The array of changes and improvements necessary will be informed by the Comprehensive Readiness Review and Secretary of the Navy Strategic Review. Among the changes and process improvements that will ultimately be put in place, we identified the need for a comprehensive fatigue and endurance management policy, and to implement fatigue recovery standards and codifying a circadian ship and watch rotation routine for surface ships. In May 2017, to ensure the analytical accuracy of Manpower Requirements Determination planning factors, my deputy for manpower, personnel, training and education, requested an independent analysis of the Navy Availability Factor to be conducted this fiscal year. The study will determine if the current components of the Navy Availability Factor remain appropriately defined to reflect the categories of time associated with the afloat-workweek. The Comprehensive Review of Recent Surface Force Incidents highlights that a recent analysis of the Navy Standard Workweek identified the fact

that typical on-duty hours exceeded the planning threshold factor. If the current components are not appropriately defined, the study will recommend revised time allowances to ensure our manpower model reflects the most current factors, and to improve the quality of manpower requirements for the current and future surface fleet. The Comprehensive Review also noted that we recently completed a related study on inport workload on DDG–51 class ships, which targeted 12 guided missile destroyers (DDGs) across five stateside homeports. The study captured current inport work and revealed that, overall, inport workload is less than at-sea for most ratings, although 10 ratings do have more work inport than while at sea. We are working to incorporate these inport requirements into updated afloat Ship Manpower Documents. We are also expanding our analysis to evaluate our Forward Deployed Naval Forces ships, those homeported overseas, and refining the inport model for use in future studies.

FORWARD DEPLOYED NAVAL FORCES READINESS

34. Senator WARREN. Admiral Richardson, Vice CNO Admiral Moran recently testified to the House Armed Services Committee that he wrongly assumed that "our Forward Deployed Naval Force in Japan was the most proficient, well-trained, most experienced force we had, because they're operating all the time." Did you share this assumption?

Admiral RICHARDSON. It is natural to assume that there is a correlation between time spent operating at sea and level of proficiency. Sea time should equal proficiency, especially in basic maritime skills such as seamanship and navigation. The recent incidents in the Western Pacific were the result of a failure of leadership. The commands failed to create a culture that prioritized training, qualifications, and flawless execution of the basics of seamanship. At the Fleet level, units were not given the required and necessary time to do dedicated training. In an effort to immediately improve in this area, Navy is establishing Naval Surface Group Western Pacific as an administrative headquarters responsible for maintaining, training, and certifying Japan-based ships, focusing on these responsibilities for operational commanders.

35. Senator WARREN. Admiral Richardson, do you think this assumption was shared so widely by Navy leadership that it was baked into official planning?

Admiral RICHARDSON. It is the responsibility of the fleet commander to ensure assigned forces are trained and ready to execute all missions, across the full spectrum of operations, for which they are designed. This stopped happening in Seventh Fleet.

TRAINING CERTIFICATIONS

36. Senator WARREN. Admiral Richardson, you noted in testimony that there are a variety of certifications that Navy ships undergo. In response to one of my questions, you testified that "just about every ship has some element of their certification expired." Please provide for the record the list of certifications required for the four ships involved in accidents in 2017, and of those, which were expired at the time of the incident.

Admiral RICHARDSON. The following certifications were required for each of the four ships, with the exception of BMD for USS *Lake Champlain* and USS *Antietam.* These two ships do not conduct the BMD mission:

- 3M—Maintenance and Material Management
- AT—Anti-Terrorism
- COMMS—Communications
- EXPSAF—Explosive Safety
- FSO–M—Fleet Support Operations Medical
- MOB–A—Mobility Aviation
- MOB–D—Mobility Damage Control
- MOB–E—Mobility Engineering
- MOB–N—Mobility Navigation
- MOB–S—Mobility Seamanship
- SAR—Search and Rescue
- SUPPLY—Supply
- AW—Air Warfare
- BMD—Ballistic Missile Defense
- CRY—Cryptology
- EW—Electronic Warfare
- INT—Intelligence
- SW—Surface Warfare
- STW—Strike Warfare

- VBSS—Visit, Board, Search and Seizure
- CMTQ—Cruise Missile Tactical Qualification
- NSFS—Naval Surface Fire Support
- USW—Undersea Warfare The following certifications were required for each of the four ships, with the exception of BMD for USS *Lake Champlain* and USS *Antietam.* These two ships do not conduct the BMD mission:
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- MOB–E—Mobility Engineering
- MOB–N—Mobility Navigation
- MOB–S—Mobility Seamanship
- SAR—Search and Rescue
- SUPPLY—Supply
- AW—Air Warfare
- BMD—Ballistic Missile Defense
- CRY—Cryptology
- EW—Electronic Warfare
- INT—Intelligence
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- STW—Strike Warfare
- VBSS—Visit, Board, Search and Seizure
- CMTQ—Cruise Missile Tactical Qualification
- NSFS—Naval Surface Fire Support
- USW—Undersea Warfare The four ships involved in accidents in 2017 exceeded re-certification periodicity in the following mission areas at the time of their respective incidents. USS *Lake Champlain:* CRY, EW, USW—All certification exercises satisfactorily completed for above mission areas. Certifications were held in a probationary status until manning deficiencies, due to the required number of personnel having the requisite schools, were met. USS *Fitzgerald:* At the time of the collision expired certifications included: COMMS, MOB–A, MOB–E, MOB–S, SUPPLY, AW, BMD, CRY, EW, INTEL, CMTQ, NSFS, SW, USW, VBSS. USS *McCain:* At the time of the collision expired certifications included: 3M, AT, FSO–M, SAR, AW, CMTQ, NSFS, SW, USW, VBSS. USS *Antietam:* At the time of the collision expired certifications included: COMMS, MOB–A, MOB–D, MOB–E, MOB–S, SUPPLY, AW, CRY, EW, INTEL, SW, USW, 3M, VBSS.

ORGANIZATIONAL CULTURE

37. Senator WARREN. Admiral Richardson, in response to a question from Senator Reed about individual ship captains standing up and saying "I can't move because my ship's not ready," you testified that you'd "give that commander a handshake and a medal. That's exactly the type of honesty and transparency that we need to run a navy that's safe and effective." What actions does the Navy intend to take to begin changing the organizational culture so that it promotes and encourages officers to speak up when they see deficiencies in readiness?

Admiral RICHARDSON. Going forward the Navy will develop and formalize "firebreaks" into our force generation and employment systems to guard against a slide in these standards. Our culture, from the most junior sailor to the most senior Commander, must value achieving and maintaining high operational and warfighting standards of performance and these standards must be embedded in our equipment, individuals, teams and fleets. Most significantly, these standards must include and account for the human factors in individual and team performance. Ongoing and immediate actions are focused on immediate upgrades and training on navigation fundamentals, assessment of operational demands and available resources and associated schedule revisions, baseline readiness assessments of all Seventh Fleet cruisers and destroyers, consolidation of authority and accountability for readiness in lines of authority, implementation of circadian watch rhythms and baseline assessment of all watch bills and baselining the force generation model in the FDNF Japan.

ORGANIZATIONAL DESIGN AND PROCESS

38. Senator WARREN. Admiral Richardson, who holds unit commanders, those homeported in the U.S. and overseas, accountable for readiness deficiencies throughout the training and deployment cycle?

Admiral RICHARDSON. CONUS-based ships operating under the Optimized Fleet Response Plan report readiness via squadron commanders to the Type Commander. Type Commanders (Commander Naval Surface Force Pacific, Commander Naval Air Force Pacific, etc) execute the Man/Train/Equip responsibilities under Title 10. For FDNF–J, USPACFLT has established the Naval Surface Group Western Pacific (NSGWP) who will report directly to Commander, USPACFLT in the near term. NSGWP is responsible for overseeing the training and certification of FDNF–J ships. This new organization will certify ships "ready for tasking" before they are deployed by operational commanders. NSGWP will provide a clear separation between force generation (training and maintenance) and force employment (operations).

39. Senator WARREN. Admiral Richardson, who is accountable within the Navy for providing the resources to improve readiness when deficiencies are identified?

Admiral RICHARDSON. I am ultimately accountable for the safe and effective operations of our Navy, and I am therefore responsible for prioritizing readiness dollars. With the $2.8B in funding approved in Fiscal Year 2017, we are plugging the most urgent readiness holes in the fleet. Our Fiscal Year 2018 request sustains the readiness progress, increases end strength, modernizes our current platforms, and purchases future platforms and capabilities needed to sustain the advantage over our adversaries. While we have prioritized our maintenance and readiness dollars, the positive effects of increased readiness funding will not remove this deficit overnight; it will take time with stable resources to sustain the upward trend.

40. Senator WARREN. Admiral Richardson, when a ship is behind its planned readiness, what is the Navy's process to meet the Global Force Management Allocation Plan and who are the decision making authorities in that process?

Admiral RICHARDSON. Ship readiness and progression through the Optimized Fleet Response Plan (O–FRP) leading to Global Force Management Allocation Plan (GFMAP) deployments are continually tracked and monitored by Type Commanders (Basic Phase), Operational (Carrier Strike Group/Amphibious Ready Group) Commanders (Integrated Phase) and the Fleet Commanders (CUSFF and CPF). When a unit is behind in projected readiness progression multiple options are reviewed, to include providing additional training resources, equipment, funding or manning to regain readiness profile. If a unit continues to lag behind projected readiness and will not achieve deployment certification standards on schedule, the Fleet Commander reviews options ranging from delaying or cancelling of the GFMAP deployment, extension of on-station ships until the unit in question can achieve appropriate readiness, or assigning other ships to meet the GFMAP presence requirement. I approve and forward the Fleet Commander's recommendation to the Joint Staff for CJCS and SecDef approval via the Secretary of Defense Orders Book (SDOB) process.

41. Senator WARREN. Admiral Richardson, who is the ultimate decision maker within the Navy when a ship should be delayed or non-deployed and how is that decision communicated to the Joint Staff and Combatant Commanders?

Admiral RICHARDSON. We are taking a hard look as to how to empower our Commanding Officers to better-manage the workday of the crew within a repeatable, sustainable, and predictable framework. The Naval Surface Forces staff has already reviewed instructions to determine what can be removed or minimized to reduce administrative burdens on the fleet. Additionally, Commander, Naval Surface Forces, Vice Adm. Rowden, has mandated the implementation of circadian rhythm shipboard watch rotations and daily routines by December 20, 2017. Circadian rhythm cycles provide our sailors with a predictable watch rotation and protected sleep periods that recognize the human circadian rhythm. It should be emphasized that the utilization of both circadian rhythm watch bills and complimentary shipboard routines are required to successfully manage fatigue. Many ships in the Fleet are already on a circadian rhythm cycle that allows for more rest between watches and enables a predictable and repeatable work/watch cycle.

QUESTIONS SUBMITTED BY SENATOR BILL NELSON

MODELING AND SIMULATION

42. Senator NELSON. Admiral Richardson, one possible contributor to these incidents is training. Other services and other communities within the Navy utilize high-fidelity simulators for training and maintaining proficiency. This is one area where the Littoral Combat Ship program excels. The integrated simulator allows for realistic advanced training for the bridge and combat teams. The immersive virtual environment allows high-fidelity training for specific watch stations. While nothing can fully replace the weight of hands-on operation, I believe these technologies can help provide better-trained and more proficient sailors. Are you looking to leverage the simulators and training models developed for the LCS program throughout the rest of the fleet?

Admiral RICHARDSON. Simulators are critical to our training strategy. Beginning in 2003, and continuing through today, the Surface Navy has invested in the use of simulation for shiphandling and navigation skills at learning sites such as Surface Warfare Officer School (SWOS) and in all Fleet Concentration Areas (FCA). Navy stakeholders assess the capabilities of these simulators against new requirements semi-annually. LCS-specific simulators and models have been assessed but not leveraged for other ship training due to their LCS-specific solutions not reflecting the characteristics of other platforms. However, based on the results of the Comprehensive Review, Navy is upgrading the Navigation Seamanship Shiphandling Trainers (NSST) currently in all FCAs with integrated navigation systems, radar and casualty control team training capability enabling Combat Information Center (CIC) personnel to train with bridge watchstanders on equipment that accurately emulates ship systems. This effort will also be leveraged to improve simulators for individual training at SWOS and other learning sites.

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