movement has often varied with respect to where specific ship classes are located from day-to-day, with several often orientated and berthed differently throughout the week. According to CNRSW, FEDFIRE "continues to champion efforts to ensure each ship class has a specific IAP." [Encl 946]

1004. Per OPNAVINST 11320.23G, Region F&ES Chiefs are responsible for facilitating the development, implementation, and periodic review of MAAs consistent with CNIC policy. Regarding the status of NBSD's MAA with San Diego Fire Department (SDFD), CNRSW FEDFIRE (b) (6) stated that he was aware the MAA was outdated, and he was not comfortable with its status. He stated that he was aware city governments were required to re-sign MAAs, but they did not want to take time to re-evaluate an agreement they felt would not change. CNRSW FEDFIRE (b) (6) stated the N5 at CNRSW and the N5 at the installation coordinate the frequency of MAA reviews. [Encl 188]

1005. Both CNRSW and CNIC acknowledged the requirement to periodically update the MAAs with local fire departments has not been met but is being addressed. CNIC stated that Regions have flexibility on MAA implementation and that CNIC is in the process of adjusting oversight responsibilities and schedules to better enable compliance. [Encl 350, 471]

1006. CNRSW FEDFIRE (b) (6) stated that he did not know the number (if any) or periodicity of drills or ship familiarization events with SDFD since his tenure as CNRSW FEDFIRE Chief. [Encl 188]

1007. CNRSW FEDFIRE (b) (6) commented that SDFD and FEDFIRE had always wanted to integrate, but there have been numerous factors influencing the level of involvement between the two entities. CNRSW FEDFIRE (b) (6) stated that if FEDFIRE could not keep with the trends and technological advancements of local fire departments, there would always be some degree of tension between the entities. CNRSW FEDFIRE (b) (6) stated that there were issues beneath the surface with SDFD that he preferred not to discuss. [Encl 188]

1008. Regarding the requirements for shipboard training in OPNAVINST 11320.23G, CNRSW FEDFIRE (b) (6) stated that he could not answer whether or not the periodicity for shipboard firefighting training was set by CNIC or Naval Sea Systems Command (NAVSEA), and he was unsure of the required periodicity for shipboard training, drills, and familiarization tours. He viewed OPNAVINST 11320.23G shipboard training requirements as being separate from the 8010 Manual drill requirements. When CNRSW FEDFIRE (b) (6) was asked whether the requirement for hose line advancement training (OPNAVINST 11320.23G, page 11-2) was met, he stated he did not know. [Encl 188]

1009. CNRSW FEDFIRE (b) (6) stated that FEDFIRE had not been adequately staffed and manned to meet the required periodicity of the 8010 Manual drill requirements, and he commented that FEDFIRE could not realistically support operational and real-world commitments while simultaneously participating in 8010 Manual Chapter 13 drills. [Encl 188]

1010. CNRSW FEDFIRE (b) (6) thought FEDFIRE had been meeting the intent of the 8010 Manual drills, even though FEDFIRE could not feasibly provide full-service support to an 8010 Manual drill. [Encl 188]

1011. CNRSW FEDFIRE (b) (6) viewed the 8010 Manual as a ship requirement FEDFIRE supports. When asked whether there were any formal FEDFIRE training requirements for ship familiarizations outside of the 8010 Manual drills, CNRSW FEDFIRE (b) (6) stated that he was unaware how the NBSD Training Officers coordinated these events. [Encl 188]

1012. CNRSW FEDFIRE (b) (6) stated that he did not know who is currently generating drill scenarios, but FEDFIRE provides input for 8010 Manual drill packages. CNRSW FEDFIRE (b) (6) stated that he had articulated ideas for more dynamic training evolutions to his FEDFIRE team. However, he described this desire as a "unicorn ambition" due time and training limitations. [Encl 188]

1013. Regarding the requirement on pages 5 – 6 of OPNAVINST 11320.23G for Navy F&ES departments to coordinate and communicate with the naval supervising activity (SWRMC) to establish lines of authority and communication, CNRSW FEDFIRE (b) (6) stated that he did not have that line of knowledge. He noted that SWRMC, through (b) (6) the Government Fire Safety Officer (GFSO), worked with CNRSW FEDFIRE to coordinate requirements. He stated that he did not have a current SWRMC point of contact, but he would expect FEDFIRE Metro (b) (6) or FEDFIRE Metro (b) (6) to conduct any necessary coordination with SWRMC. [Encl 188]

1014. CNRSW FEDFIRE (b) (6) stated that he was unfamiliar with OPNAVINST 3440.18. To his knowledge, CNIC does not provide any training on this instruction. [Encl 188]

1015. CNIC acknowledged there was a lack of training and awareness at the Region and installation level to OPNAVINST 3440.18, and assessed that Region SW should work with SWRMC to ensure major drill scenarios "are robust enough to trigger a full OPNAVINST 3440.18 response." CNIC also acknowledged the communication equipment challenges between SDFD and FEDFIRE personnel and assessed that Region SW should have the capability to communicate with mutual aid fire responders and have this laid out in the SWRMC Fire Response Plan. [Encl 350]

B. CNIC

Emergency Management and FEDFIRE Oversight

1016. OPNAVINST 3440.17A directs CNIC to develop, implement, and sustain EM programs at Navy regions and installations and to ensure programs are aligned with the NIMS and Incident Command System (ICS). Per OPNAVINST 11320.23G, CNIC, through CNIC N30, develops policy, budgeting, and guidance for the Navy F&ES program. Per OPNAVINST 11320.23G, CNIC N30 is tasked with developing, interpreting, and publishing Navy F&ES Program policy; interpreting, revising, and establishing organization policies to meet evolving F&ES community

standards; identifying and prioritizing required F&ES resources and capability following a risk-based strategy; evaluating and approving variances for staffing; reviewing F&ES operations for all F&ES incidents where proper performance of the F&ES department is in question; and, conducting a Program Compliance Assessment (PCA) and site visits to F&ES departments at least once every five years. Contrary to these requirements, CNIC has not conducted a PCA or site visit to CNRSW since June 2012. [Encl 687, 991]

1017. When asked when CNIC last completed a PCA of CNRSW F&ES in accordance with OPNAVINST 11320.23G paragraph 5.b.(14), CNIC N30, (b) (6), stated that the last PCA had been prior to the USS MIAMI (SSN-755) fire, which was over eight years ago. He also confirmed CNIC had not conducted a site visit to CNRSW in the last five years. [Encl 687, 991]

1018. The last PCA, conducted in June 2012, neither assessed FEDFIRE's shipboard firefighting proficiency nor the status of FEDFIRE's shipboard training. [Encl 991]

1019. CNIC N3, (b) (6), was unaware when the last PCA had been completed for CNRSW F&ES, and he was surprised to learn the last PCA of CNRSW had been prior to the MIAMI fire. He speculated that part of the reason for the absence of a PCA could have been in part due to the assessments resulting in little or no value to installations, stating "when an activity does not result in value, it becomes less of a priority." [Encl 992]

1020. CNIC was aware that Region SW consolidated the San Diego metro installations into a single F&ES organization and assessed it provides for the effective utilization of management staff, reduces administrative overhead, and encourages cross utilization of response resources. CNIC assessed that the consolidation does not reduce or change actual response times, staffing, or capabilities, and it is consistent with other locations to include Hampton Roads, Region Northwest, and Region Hawaii. CNIC assessed these consolidated F&ES departments operate with sufficient oversight and installation involvement and it is up to the Regions to define the command relationships. [Encl 350]

1021. Per OPNAVINST 3440.18, CNIC is responsible for coordinating assistance from the appropriate region and installation commands both internal and external to the affected Navy region in the event of an in port non-nuclear shipboard casualty. According to (b) (6), CNIC F&ES Operations Manager (N30), OPNAVINST 3440.18 is confusing in regard to who has responsibility for what. He stated that the instruction falls to the EM side of CNIC. [Encl 993]

1022. When asked about CNIC's responsibilities under OPNAVINST 3440.18, CNIC N30, (b) (6), noted that CNIC is responsible for coordinating assistance to affected Navy Regions. He added that regions are able to request external assistance without prior CNIC approval. He went onto say that regions could send a request for support to CNIC, who would then assist the region coordinating support. [Encl 687]

1023. When asked whether CNIC had provided training on OPNAVINST 3440.18, including training specific to its requirements, CNIC N30, (b) (6), noted that training is offered by CNIC N36 to new installation leaders. The training is called the Senior Shore Leader Course

and is an "overarching training," meaning new COs and Executive Officers (XOs) usually attend additional local trainings upon completing CNIC's course. When asked whether the training specifically covers OPNAVINST 3440.18 requirements, he was not aware of all of the specific topics presented at the training and he would have had to confirm with N36. [Encl 687]

1024. When asked about the level of awareness his team had to OPNAVINST 3440.18, CNIC, VADM Lindsey stated that they were fully aware of the policy and participated in its development. He also stated this topic is discussed in the Senior Shore Leaders Course and has been expanded since the fire on 12 July 2020. [Encl 350]

1025. Per 8010 Manual paragraph 2.6.1, CNIC shall also participate in NAVSEA audits of each Navy activity performing or contracting for ship construction, where Navy F&ES is the organization responsible for primary fire response. According to CNIC N30, (b) (6), RMC teams lead and conduct Fleet Maintenance Activity Assessments (FMAA), and the assessment teams include CNIC (when on an installation). [Encl 993]

1026. Per OPNAVINST 3440.18, CNIC is also required to participate in respective area or unified area command planning, training, and major shipboard casualty drills. Per 8010 Manual Chapter 13, CNIC is required to evaluate 8010 Manual Chapter 13 drills, particularly the on-scene Incident Management Structure and ROC/EOC's performance. CNIC N30, (b) (6), stated that CNIC staff attends most shipyard 8010 Manual Chapter 13 drills, and CNIC would ask a region staff member to participate if CNIC could not attend. [Encl 687]

1027. CNIC N30, (b) (6), participated in 30 8010 Manual Chapter 13 drills, only six of which have been at RMCs, and none in last two years. [Encl 993]

1028. CNIC N30, (b) (6), stated that 8010 Manual drills are locally evaluated by the participating fire department. He went onto say that 8010 Manual Chapter 12 drills are evaluated by the region's training evaluation team. [Encl 687]

1029. CNIC N30 stated that Navy Regions oversee compliance with installation-level requirements, and CNIC occasionally conducts spot-checks. [Encl 687]

1030. When the CNIC N30 was asked to explain requirements for shipboard firefighting training, he asserted that these requirements are included in the duty tasks in Enterprise Safety Applications Management System (ESAMS). He also explained the CNIC determines how frequently various trainings are conducted per OPNAVINST 11320.23G. [Encl 687]

1031. When asked whether there was a minimum number of annual shipboard fire training hours, CNIC N30 did not know the exact requirement other than "a significant amount." He was unsure whether CNRSW was in compliance with any hourly training requirements. [Encl 687]

1032. CNIC N30 explained training requirements are contained in CNIC HPD directives, and there is no overarching policy document or training plan outside of these directives. He stated that the ESAMS duty tasks system consolidates requirements into a single location. CNIC N30 stated that all HPD directive requirements would have been compiled in ESAMS duty tasks. [Encl 687]

1033. When asked how an inspector would review requirements to confirm completion of all requirements, the CNIC N30 stated that an inspector could look in ESAMS. However, CNIC N30 acknowledged that ESAMS does not necessarily cite to specific instruction requirements, but rather, general training categories. [Encl 687]

1034. CNIC assessed that all FEDFIRE shipboard firefighting training requirements are incorporated into ESAMS and that the headquarters staff has a very good understanding of all these requirements. CNIC acknowledged that tracking compliance of these requirements in ESAMS is challenging but that it does not relieve responsibility to conduct and document training. [Encl 350]

1035. When asked about FEDFIRE's radios, CNIC N30 stated that he was aware of FEDFIRE's challenge communicating with municipalities. He observed that tri-band radios — the radios FEDFIRE desires — are very expensive, and existing radios have the ability to be patched without the need for tri-band radios. For this reason, the CNIC N30 did not think every firefighter required a tri-band radio; only the Incident Commander (IC) firetruck requires this capability. He noted that he had heard patching had been "hit or miss." [Encl 687]

1036. While discussing modernization efforts, the CNIC N30 noted that modernizing and installing IC management computers into firetrucks had been "on [CNIC's] radar." However, he observed it has been "very difficult" to acquire devices approved by the Navy Marine Corps Intranet system capable of working in FEDFIRE's mobile command unit. [Encl 687]

1037. CNIC N30 also thought equipment cost had become an issue the past few years. For example, employees are receiving pay raises and non-labor inflation factors each year, while the labor and non-labor budget shortfalls continue to increase, which results in an annual funding shortfall. He noted that CNIC has managed this by moving money around from different programs to pay expenses (both labor and non-labor). [Encl 687]

1038. The Office of the Chief of Naval Operations (OPNAV) Director of Shore Readiness (N46), (b) (6) , noted there is no single resource sponsor for fire safety. She explained that FEDFIRE requirements exist as a sub-element of the overall base operations budgets and acquiring detailed information about resource requirements has historically been a challenge, despite repeated requests. (b) (6) further stated that CNIC fully owns their line of accounting and could move money around on any non-labor base operations line item to fund CNIC's priorities. [Encl 789]

Section IX: Resulting Condition of BONHOMME RICHARD

1039. The fire caused extensive damage and equipment loss throughout USS BONHOMME RICHARD (LHD-6). In the immediate aftermath of the fire, Naval Sea Systems Command (NAVSEA), NAVSEA21, and NAVSEA05 conducted a stem-to-stern fire damage assessment report (subsequently referred to as the "Material Assessment" (MA)). In addition to cataloguing the damage, the MA assessed the material condition and structural integrity of the ship as a precursor to the process of developing plans and options to inform the feasibility of repair and restoration. The initial MA report was completed on 1 August 2020. [Encl 731, 994]

1040. To determine the full scope of damage to BONHOMME RICHARD, the MA initially divided the ship into zones, with the intent to assess each compartment within a respective zone for structural, fire/heat, or water damage. Due to the catastrophic nature of the actual damage conditions, the MA modified their initial compartment-by-compartment assessment to instead provide a gross assessment of groups of compartments. In many areas, the damage was so extensive that the MA was unable to identify specific compartments, as the fire and explosions created large open areas spanning several decks. Overall, the MA concluded that approximately 63 percent of BONHOMME RICHARD was impacted by the fire. [Encl 731, 994]

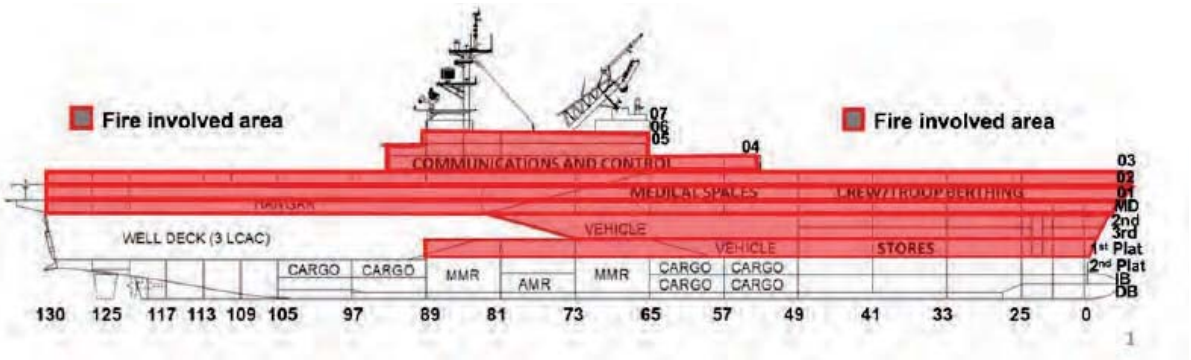

Figure 41 is a MA diagram indicating the fire-involved areas of BONHOMME RICHARD.

1041. The damage to the island is particularly notable, as the interior of the island is constructed primarily of aluminum, which has a lower melting point than carbon steel. The island was completely hollowed-out by the fire, transforming nearly a third of the 300-ton structural mass into molten aluminum. This molten aluminum drained through the island's Flight-Deck level foundation penetrations onto the decks below, creating lava-like flow across lower-level steel decks and through vertical deck penetrations. No material remaining within the island is salvageable, as the fire essentially left exterior bulkheads with no other support structure. Due to the lack of structural integrity, should the ship be towed on the open-ocean, the island must either be removed or buttressed. [Encl 731, 995, 996, 997, 998]

Figure 42 shows investigation team members examining a solidified aluminum flow.

1042. As noted above, the loss of the interior island structure compromised the island's structural integrity, leading to the collapse of the forward mast and necessitating the removal of the aft mast in the weeks after the fire. [Encl 731, 999, 1000]

Figure 43 shows the island's interior, illustrating that the overhead has completed burned away.

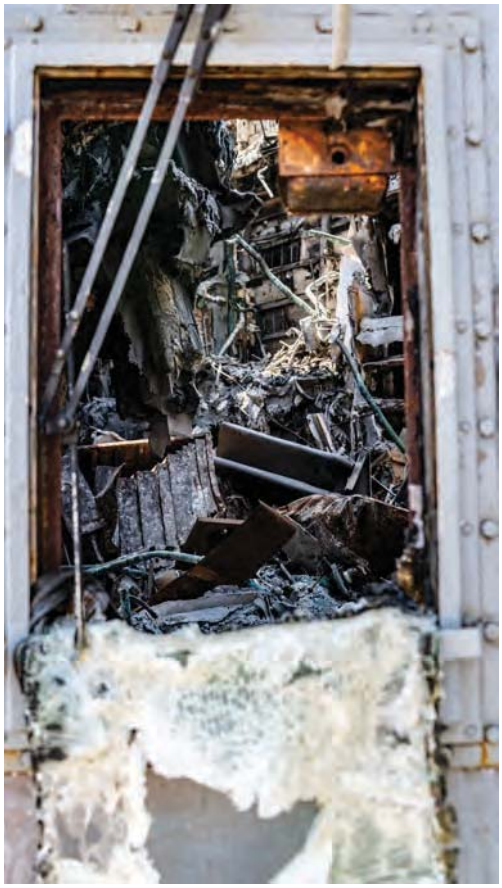

Figure 44 is another photograph of the island's interior.

1043. In numerous locations below the Flight Deck, steel structural I-beams are substantially warped/bent, indicating in these areas of the ship, the fire temperature approached or exceeded the forging temperature of carbon steel (2,100 degrees Fahrenheit). The MA concluded that the structural compromise of these beams would require the replacement of the entire Flight Deck. Also, below the Flight Deck and throughout the ship, several aluminum ladders melted away, leaving behind hazardous multi-deck openings. [Encl 731, 1001]

1044. The fire extensively damaged cables and cableways spanning the entire length of BONHOMME RICHARD. The MA concluded that many cable systems must be removed along their entire length, including the sections passing through undamaged spaces. Calculations for the quantity of cable requiring replacement were not included in the MA, but it concluded that the entire four million feet of combat systems and command, control, computers, and intelligence (C5I) cabling originally installed on BONHOMME RICHARD would require replacement. [Encl 731]

1045. The MA did not fully assess damage to distributed systems, such as ventilation, heating/cooling, potable water, chill water, Collection, Holding, Transfer (CHT), and others. However, each system passes through both damaged and undamaged compartments, which would necessitate careful mapping for damage. [Encl 731]

Figure 45 shows burned cableways in the Lower Vehicle Stowage Area (Lower V).

1046. To aid in repair calculations, the MA established an approximate "cut-line," above which virtually no compartment is salvageable. The MA concluded that restoration above the cut-line would entail the removal and replacement of entire decks, compartments, and all associated contents and equipment. Major spaces above the cut-line include: the island structure, all 02-level compartments for the entire length of the ship, all 01-level compartments from Frame 25 to the stern, all compartments on the Main Deck from Frames 25 to 89. Key spaces below the cut-line that still require total replacement include Damage Control (DC) Central (5-79-0-C, Ship's Laundry (4-73-0-Q), Upper Vehicle Stowage Area (Upper V) (3-49-0-A) and Lower V (4-49-0-A). [Encl 731]

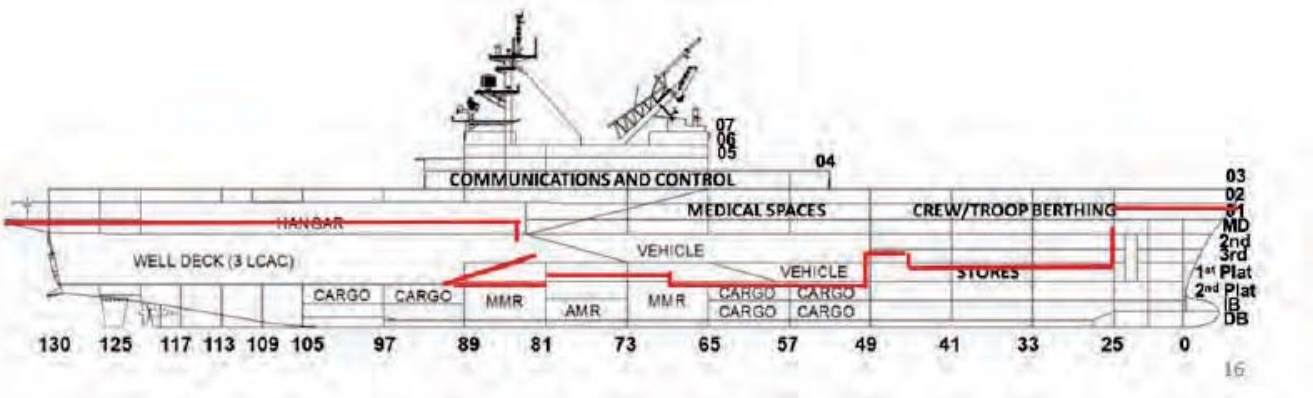

Figure 46 shows the NAVSEA "cut-line."

1047. Below the cut-line, the MA concluded that most compartments are either intact or could be repaired via standard ship repair processes. Major spaces below the cut-line include: 1 Main Machinery Room (MMR) (6-65-0-E), 2 MMR (6-81-0-E), Auxiliary Machinery Room (AMR) (6-73-0-E), Lower Cargo Ammunition Magazines (6-49-0-M, 6-57-0-M), Aft Steering (7-121-2-

E, 7-121-3-E, and the Fo'c'sle (01-T-0-Q). Of note, many of these spaces were exposed to salt water and would require restoration. Additionally, in many of these compartments, the overheads were impacted by the fire; in some circumstances, this would require replacement of the compartment's upper feet. [Encl 731]

1048. In various areas throughout BONHOMME RICHARD, there is a stark distinction in the severity of damage between neighboring compartments, with one compartment heavily damaged and the other much less affected. This appears to have occurred primarily where any openings between the two compartments (such as hatches and scuttles) were closed, preventing the spread of heat, smoke, and flames. [Encl 1002]

Figure 47 shows two compartments separated by a closed hatch. One compartment was severely damaged, while the adjacent compartment suffered minor damage.

1049. On 30 November 2020, the Secretary of the Navy (SECNAV) announced BONHOMME RICHARD would be decommissioned due to the extensive damage suffered during the fire. SECNAV estimated cost to repair BONHOMME RICHARD would have exceeded $3 billion, with the projected timeframe for completion estimated at 5 – 7 years. Other options for the ship, such as conversion to a hospital ship or submarine tender, were rejected as the estimated conversion cost exceeded $1 billion. In contrast, Commander, Navy Region Maintenance Center (CNRMC) estimated the decommissioning process would cost $30 million and would be completed within 9 –12 months. [Encl 1003]

1050. On 26 January 2021, the Office of the Chief of Naval Operations (OPNAV) directed BONHOMME RICHARD to be decommissioned, with an effective date of 15 April 2021. [Encl 1004]

1051. Beyond the damage suffered by BONHOMME RICHARD, USS FITZGERALD (DDG-62), which was moored on the south side of Pier 2 across from BONHOMME RICHARD, suffered damage from the fire and explosions as well. Aboard FITZGERALD, 10 gas turbine generator intake filters were damaged, an estimated value of approximately $3,000. No other ships were damaged during the fire. [Encl 1005, 1006]

1052. Additionally, various pieces of Naval Base San Diego (NBSD) equipment located on the pier were damaged during the fire. On Pier 2, 20 shore power cables, each 180 feet in length, sustained heat damage, compromising their insulation and requiring replacement. Additionally, 22 Viking plug pigtails, which connect the shore power cable to the power mound, suffered similar damage and require replacement as well. The replacement cost estimate for the damaged shore power equipment is approximately $270,000. Further, various hoses on Pier 2 were compromised due to excessive heat, including 150 feet of 2-inch steam hose, 200 feet of 3-inch CHT hose, and 100 feet of 2.5-inch oily waste hose. The replacement of cost of these hoses is estimated to be $10,000. [Encl 1007]

1053. During the firefighting effort, numerous items of Federal Firefighting Department (FEDFIRE) equipment were damaged or destroyed, requiring replacement. Approximately 4,800 feet of 2.5-inch and 3-inch firefighting hoses were destroyed during the fire, and an additional 10,400 feet of water supply line hoses require replacement after failing safety tests under National Fire Protection Association (NFPA) Standard 1500. The total replacement cost for these hoses is estimated to be $68,830.40. Additionally, 60 Self-Contained Breathing Apparatus (SCBA) masks were damaged during the firefighting effort. FEDFIRE was able to replace 35 masks with its existing inventory but requested the purchase of 25 additional masks to address the remaining deficiency. The replacement cost for these masks is estimated to be $7,172.50. [Encl 1008, 1009, 1010]

1054. Under the authority of the Military Personnel and Civilian Employees' Claims Act (31 U.S.C. §3721), military personnel may request compensation for loss, damage, or destruction of personal property incident to service. Claims are adjudicated by examiners in the Claims and Tort Litigation office (Code 15) of the Office of the Judge Advocate General (OJAG). As of 1 December 2020, Code 15 had received 123 claims for personal property loss related to the BONHOMME RICHARD fire and approved 112 of those claims. Eight claims were denied or withdrawn, as the property in question was covered by private insurance, and one claim was referred to the Torts Division of Code 15. In total, $165,063 has been paid to Sailors to compensate for personal property lost during the BONHOMME RICHARD fire. [Encl 1011]

Section X: Personal Injuries

1055. Throughout the fire, USS BONHOMME RICHARD (LHD-6) medical department, which included the Senior Medical Officer (SMO), (b) (6) , the ship's General Medical Officer (GMO), the ship's Medical Administration Officer (MAO), and the duty corpsmen, provided medical triage and facilitated medical evacuations for injured personnel. [Encl 263, 302, 1012, 1013]

1056. BONHOMME RICHARD's medical department reported a total of 68 uniform and civilian personnel who sustained injuries associated to the fire response. Of these 68 personnel reported injured, 45 were uniform personnel and 23 were civilian personnel; 38 of the uniform personnel were assigned to BONHOMME RICHARD. The remaining 7 uniform personnel who sustained injuries were assigned to USS LAKE ERIE (CG-70) Commander, Naval Surface Force Pacific (CNSP), USS FITZGERALD (DDG-62), and USS COMSTOCK (LSD-45). [Encl 1014, 1015]

1057. Injuries reported included smoke inhalation, dehydration, heat injury, acute kidney injury, closed head injury, mild traumatic brain injury (concussion), broken hand, back pain injury, eye injury, rhabdomyolysis, dizziness, electrical shock, ankle injuries, syncope (fainting) and torn muscles. [Encl 1014]

1058. BONHOMME RICHARD medical department assessed that they did not have sufficient medical supplies on-scene due to the majority of their supplies being on the ship. Based on this assessment and limited resources, personnel were placed in the nearest ambulance if requiring advanced care. [Encl 263]

1059. Prior to the first explosion, the medical department reported that only one individual was medically evacuated. The largest influx of personnel requiring medical attention occurred after the first explosion, with numerous personnel suffering concussions. [Encl 263]

1060. On 14 July 2020, after the SMO observed Sailors experiencing mental health issues associated with the fire, a mental health practitioner was called to the scene. Personnel requiring medical attention were brought into the triage area and were then referred to the mental health practitioner as necessary. [Encl 263]

1061. Personnel were transported to multiple medical treatment facilities, including Naval Medical Center San Diego, Scripps Mercy Hospital, University of California San Diego Medical Center, Sharp Memorial Hospital – Chula Vista, Scripps Clinic La Jolla, and Paradise Valley Hospital. The majority of injured personnel were released the same day they were admitted to the medical treatment center. Some personnel required hospitalization for multiple days. [Encl 65, 198, 1014]

1062. As of 20 July 2020, all injured personnel were discharged and determined to be in stable condition. However, nine BONHOMME RICHARD Sailors who incurred injuries as a result of the explosions were referred to Naval Hospital Balboa's Traumatic Brain Injury Clinic, where they continue to receive medical care. [Encl 1014, 1016]

1063. During the fire, BONHOMME RICHARD medical department tracked injuries and treatment information manually via paper records. The BONHOMME RICHARD MAO compiled information on total injuries and medical transport information into a spreadsheet, which was used to provide situation reports during the incident. [Encl 1013, 1014]

1064. BONHOMME RICHARD's medical department established a pierside triage tent in the vicinity of the ship, as well as a main triage center at the Base Theater. A rehabilitation center was also established outside of the Naval Base San Diego (NBSD) Commanding Officer's (CO) building. [Encl 263, 302, 1013]

1065. The triage location moved several times due to the explosions and the projected blast radius for potential future explosions. Following moves to the Afloat Training Group (ATG) and ESG-3 parking lots, the main triage center was moved to the NBSD Base Theater at approximately 2100 on 12 July 2020. For the remaining duration of firefighting efforts, the main triage center was located in the Base Theater. [Encl 263, 302]

1066. Two triage officers from BONHOMME RICHARD oversaw operations on the afternoon of 12 July 2020. Once the triage center was ultimately established at the Base Theater, a senior physician remained in the Base Theater at all times, while additional physicians moved from the pierside triage tent to the Base Theater. A roving corpsman identified personnel who required assistance and monitored personnel in rehabilitation centers, which were established outside of the NBSD CO building. [Encl 263]

1067. According to the SMO, BONHOMME RICHARD's medical department personnel operated independently from civilian medical personnel from Federal Firefighting Department (FEDFIRE) and San Diego Fire Department (SDFD), though they coordinated through a civilian liaison who provided periodic reports on any major medical issues. Civilian agencies maintained triage stations outside of the Base Theater and communicated with BONHOMME RICHARD medical personnel if they required equipment or assistance. [Encl 263]

1068. On 12 July 2020, a representative from the medical Department provided an hourly report to BONHOMME RICHARD's leadership at the Emergency Operations Center (EOC). From 13 – 16 July 2020, a medical department representative provided a status update to BONHOMME RICHARD's CO, CAPT Gregory Thoroman, or Executive Officer (XO, (b) (6) , approximately every three hours. [Encl 263]

1069. The BONHOMME RICHARD medical department established a duty section rotation on 13 July 2020, with shifts divided between 14 hours on and 10 hours off. [Encl 263]

1070. In addition to the injuries reported by BONHOMME RICHARD, SDFD reported 18 of their personnel injured as a result of the fire response efforts. Coronado Fire Department also reported one employee injured as a result of the fire response efforts. [Encl 1017, 1018]

Section XI: Review of Policies, Procedures, and Programs Relating to Fire Prevention and Casualty Response

Eight years before the USS BONHOMME RICHARD (LHD-6) fire, the USS MIAMI (SSN-755) caught fire in an availability and was lost. Following this fire, the Navy maintenance, fleet, and installation communities undertook extensive efforts to ensure it would never happen again. These efforts have continued to today as Commander, U.S. Fleet Forces exercises the role of Executive Agent (EA) for Damage Control (DC).

A. MIAMI Fire and Response

1071. On 23 May 2012 at approximately 1730, a fire initiated when a shipyard employee lit a bag of rags stored with other combustibles in Wardroom Stateroom 1 aboard MIAMI. The ship was in Dry Dock 2 at Portsmouth Naval Shipyard (PNSY) in the third month of a 20-month availability. A casualty control alarm was pulled by shipyard employees in the torpedo room after they unsuccessfully searched for the source of fire, which initiated response by the ship and PNSY Federal Firefighting Department (FEDFIRE). [Encl 1019]

1072. PNSY FEDFIRE was on-scene at 1743 and immediately began running hoses onto the ship. Confusion regarding location of the fire led to the initial responders going to the torpedo room instead of the Wardroom Staterooms. At 1825, based on high heat conditions and reports of injured firefighters, the MIAMI Commanding Officer (CO) evacuated all Ship's Force personnel from the forward compartment. [Encl 1019]

1073. Mutual aid was requested from multiple organizations at 1959, and the first responding units arrived on-scene by 2013. Ship's Force reentered the ship at 2020 after spaces had been cooled sufficiently by in-hull sprinkler hoses and external hull cooling. The MIAMI fire ultimately burned for approximately 10 hours before being declared out at 0550. A Naval Sea Systems Command (NAVSEA) command investigation convened and found that while the fire was intentionally set, there was a missed window of opportunity to control, contain, and extinguish the fire. [Encl 1019]

1074. The first recommendation in the MIAMI command investigation was for Commander, U.S. Fleet Forces Command (USFF) to establish an independent investigative team to evaluate the organizational construct and effectiveness of shipboard firefighting on U.S. installations and shipyards. USFF coordinated a policy and programmatic inquiry (termed the "Fire Review Panel") following the MIAMI fire that was to convene shortly after the NAVSEA command investigation finalized its report. [Encl 1019]

1075. The MIAMI Fire Review Panel appointed by USFF was tasked with conducting a comprehensive examination of all contributing factors to the fire aboard MIAMI as informed by the facts and circumstances of the NAVSEA command investigation into the incident. The MIAMI Fire Review Panel report included inputs from NAVSEA, Commander, Navy Installation Command (CNIC), and Naval Reactors. [Encl 1019, 1020]

1076. The MIAMI Fire Review Panel report was issued on 16 November 2012 and included 99 recommendations, of which 39 were evaluated to be of highest priority for action. These recommendations were categorized as fire prevention, fire detection, immediate response and extended response. [Encl 1019, 1021]

1077. Following completion of the MIAMI Fire Review Panel, the Chief of Naval Operations (CNO) endorsed the report and appointed USFF as the Executive Agent for all DC equities for the Navy, which included the action and implementation of the recommendations in the report. As of 3 September 2020, two items on the MIAMI Fire Review Panel priority recommendation had not been approved as completed. Items 5.2 and 33 are still awaiting administrative closure, and both actions are specific to submarines. [Encl 1022]

B. Fires since MIAMI

1078. Since the MIAMI fire occurred in 2012, 894 reportable fires aboard afloat units have been reported to Naval Safety Center through the Web Enabled Safety System (WESS). [Encl 1023]

1079. A Naval Safety Center study found approximately 92 percent of fire events in port went unreported from 2017 – 2018. This study compared WESS data against other sources, which included NAVSEA Trouble Report, and National Fire Incident Reporting System (NFIRS) data. [Encl 1024, 1025, 1026]

1080. Three major shipboard fires occurred during availabilities in the 8 years between the fires aboard MIAMI and BONHOMME RICHARD. The fires on USS GUNSTON HALL (LSD-44), USS OSCAR AUSTIN (DDG-79), and USS IWO JIMA (LHD-7) cumulatively resulted in more than $73 million in damage. [Encl 1027, 1028]

1081. On 3 March 2015, a fire occurred aboard GUNSTON HALL due to improper hot work during an availability in General Dynamics National Steel and Shipbuilding Company (NASSCO)-EARL Shipyard. The fire occurred during normal weekday working hours and burned for four hours before being extinguished by a combined Ship's Force and local civilian firefighting team. The subsequent command investigation noted:

a. Lack of quick-disconnects resulted in the ship not being able to properly establish fire and smoke boundaries, inhibiting the crew's response to the casualty.

b. Crew move aboard had occurred and combined with ongoing hot work, resulted in conditions favorable to a fire occurring.

c. Confusion by Ship's Force and lack of a muster resulted in an event where the crew responded individually as trained but not well as a cohesive unit.

d. Recommendation number eight suggested training should be conducted on indirect firefighting techniques when preparing for and during industrial availabilities.

[Encl 1029]

1082. On 10 November 2018, a fire occurred aboard OSCAR AUSTIN due to improper hot work during an availability in BAE Systems Norfolk Ship Repair Facility. The fire occurred on second shift and was properly extinguished by the duty section using temporary firemain. Norfolk City Fire Department provided support equipment, but did not integrate with Ship's Force. The subsequent command investigation noted:

a. Boundary cooling limited the spread of the fire and resulting damage.

b. Smoke boundaries were not able to be fully set due to temporary services with no quick-disconnects fouling hatches and doors.

c. Although they successfully combatted the fire, the Ship's Force fire party was not well organized and did not follow the Inport Emergency Team (IET) watchbill for the day.

d. The IET that fought the fire had not executed a single drill as a team throughout the availability period, only participating in drills with their partner section.

e. The ship was overdue for an 8010 Manual Chapter 12 drill at the time of the fire.

[Encl 700]

1083. On 14 November 2019, a fire occurred aboard IWO JIMA while undergoing an availability at Naval Station Mayport. The fire started from unknown causes in a cargo hold filled with a large amount of co-mingled material and had achieved flash-over prior to discovery. The fire occurred just before 0000 on a weekday and burned for approximately five hours before being successfully extinguished. The ship was late in the availability and had already conducted its Damage Control Material Assessment (DCMA). The subsequent command investigation noted:

a. Temporary services were run throughout the ship, making it difficult to set and maintain boundaries.

b. Sailors acted admirably and expeditiously once activated, but the time period in which the fire built prior to detection made the resulting scope of damage nearly inevitable and was compounded by the ineffectiveness of halon.

c. Halon was ineffective because of the inability to properly isolate the space due to fouling from temporary services.

d. Three fire teams backed out of the affected space assessing conditions before an experienced Damage Controlman provided forceful backup to duty section fire teams.

[Encl 1030]

1084. The command investigation reviewed several other significant fires resulting in damage to naval vessels outside of availabilities. These include fires aboard USS HUÉ CITY (CG-66), USS BOXER (LHD-4), USS DEVASTATOR (MCM-6) and USS CHAMPION (MCM-4).

There is no central repository for these investigations, so this list may not be exhaustive. [Encl 1031, 1032, 1033, 1034]

1085. On 14 April 2014, a fire occurred aboard HUÉ CITY at sea. The command investigation determined the fire was likely caused by ignition of rag bales stored in an uptake trunk by heat from gas turbine exhaust. The fire resulted in approximately $18 million in damage. Although the damage was significant, the rapid reaction and effective firefighting efforts by Ship's Force was credited with preventing a catastrophic loss to life and the ship. [Encl 1033]

1086. On 21 May 2018, a fire occurred aboard BOXER following a return to Naval Base San Diego (NBSD) from the sea trials of an availability. A class "C" fire in the starboard mooring station occurred due to excessive resistance in connected shore power cabling. The fire was extinguished in just over an hour by a combined effort of BOXER, USS RUSSELL (DDG-59), and FEDFIRE. The command investigation noted:

> a. DC efforts were complicated when the ship experienced a partial loss of power and complete loss of communications other than sound-powered phones.
>
> b. Engineering Duty Officer (EDO) went to the scene vice DC Central, contributing to on-scene personnel directing efforts. The investigation noted that while it worked for this fire, it may not in a larger casualty.

[Encl 1034]

1087. On 14 March 2019, a fire occurred aboard DEVASTATOR while pierside in Bahrain. A class "A" fire ignited due to an exhaust leak igniting lagging in the vicinity. DEVASTATOR was not in an availability when the fire occurred. The fire was extinguished using halon and firefighter action to cool hot spots. Firefighting was accomplished using Ship's Force, personnel from adjacent ships, and FEDFIRE. [Encl 1035]

1088. On 29 November 2019, a fire occurred aboard CHAMPION while pierside at NBSD with only duty section personnel aboard. Although the ship was not in an availability, it was undergoing scheduled maintenance by Ship's Force. Upon indications of a fire in the Main Machinery Room (MMR) from an installed heat detection system, initial efforts to extinguish the fire using Aqueous Film Forming Foam (AFFF) bilge sprinkling and halon were ineffective. The ship did not activate overhead sprinklers designed for this ship class specifically to combat a class "A" fire. The ship experienced a loss of power resulting in the loss of firefighting capability, leading the Command Duty Officer (CDO) to evacuate the ship. The ship turned over all firefighting to FEDFIRE upon their arrival. Following this fire, FEDFIRE noted that the lack of DC Plates for each ship on the NBSD waterfront was a deficiency requiring corrective action. [Encl 1032, 1036, 1037]

1089. On 28 March 2020, a fire occurred aboard USS HARPERS FERRY (LSD-49) while the ship was in the NBSD graving dock for an availability. The class "A" fire occurred in the CO Stateroom on a weekend and was extinguished by the duty section within half an hour of

detection. FEDFIRE responded, but were not used by Ship's Force to extinguish the fire. [Encl 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045]

1090. The BONHOMME RICHARD investigation team found other fires during industrial availabilities that occurred on non-U.S. vessels within the year prior to the BONHOMME RICHARD fire. [Encl 1046, 1047, 1048]

C. Executive Agent for DC and the DC Board of Directors

1091. Consistent with the first MIAMI Fire Review Panel recommendation, USFF, ADM William Gortney, requested USFF be designated as the CNO's EA for DC Modernization and Improvement in November 2012. [Encl 1019, 1020, 1021, 1049]

1092. The CNO designated USFF as the EA for DC Modernization and Improvement on ltr 3541 Ser N00/10080 of 5 December 2012. In doing so, USFF was tasked with coordinating with stakeholders to perform four functions:

a. Oversee recommended changes to doctrine, training, and equipment resulting from command or safety investigations.

b. Ensure needed DC improvements identified through other means are included in the requirements process.

c. Establish and serve as the head of a senior advisory group to the CNO on DC matters.

d. Develop a process for integrated Fleet and Type Commander (TYCOM) review and adjudication of NAVSEA responses to class "A" mishap recommendations.

[Encl 1049, 1050]

1093. The second MIAMI Fire Review Panel recommendation was for the Office of the Chief of Naval Operations (OPNAV) to establish a senior advisory group to USFF, as the CNO's DC EA. This recommendation was completed with the creation of the Damage Control Board of Directors (DCBOD), established to include the Commanders of Naval Surface, Submarine and Air Forces as well as NAVSEA, OPNAV N9, and CNIC. The DCBOD reports to USFF and Commander, Pacific Fleet (PACFLT). The DCBOD, and the subgroups that report to it, was chartered to oversee long-term actions related to DC as well short-term direction to ensure completion of all corrective actions arising from the MIAMI fire. [Encl 1019, 1020, 1021, 1049]

1094. The DCBOD Charter includes objectives to review trends and common root causes from DC class "A", "B," and "C" mishaps, conduct bi-annual reviews of all instructions and guidance related to shipboard firefighting, and annually evaluate trends and lessons learned from public and private Fire Response Plan (FRP) drills. Contrary to this charter and the MIAMI Fire Review Panel recommendations, not all command investigations involving shipboard fires have been forwarded to USFF and the DCBOD for review and analysis. [Encl 1030, 1049, 1050, 1051]

1095. On 19 May 2019, USFF signed the final endorsement for the command investigation for the fire aboard OSCAR AUSTIN. The endorsement directed the DCBOD to "take appropriate measures to further improve our processes for prevention and management of fires in the industrial setting." The CNO tasked the DCBOD with tracking outstanding recommendations from safety and command investigations. On 1 July 2019, the DCBOD met and discussed the Safety Investigation Board (SIB) and command investigation results from OSCAR AUSTIN. The DCBOD directed the following actions (among others):

a. NAVSEA review the 8010 Manual to account for personnel aboard a ship during an availability and make appropriate changes.

b. NAVSEA review oversight processes for FRPs to ensure compliance with the 8010 Manual and NSTM 555.

c. NAVSEA audit all Regional Maintenance Centers (RMC) to ensure compliance with hot work management requirements of the 8010 Manual, including Chapter 12 drills.

d. Commander, Naval Surface Forces (CNSF) establish/update procedures for pre-availability Ship's Force training to ensure DC readiness for an industrial environment, including the 8010 Manual.

e. CNSF review current risk assessment policies governing shipyard maintenance periods to better assess methods for determining number and make-up of duty sections.

[Encl 1052, 1053]

1096. Minutes from the 1 July 2019 DCBOD show that the CNSF N4, (b) (6) , specified updates were warranted to the 8010 Manual training requirements and the CNSF Surface Force Repair Party Manual's compliance with the 8010 Manual. He further stated that the actions would carry over into availabilities and likely include no-notice drills. [Encl 747, 748, 1054]

1097. CNSF Force DC Officer, (b) (6) , sent a memorandum to the DCBOD on 25 September 2019 regarding pre-availability Ship's Force training states that CNSF was updating CNSP/CNSLINST 3541.1A to add a tab specifically for industrial environment casualty response. Additionally, the CNSF Force DC Officer stated that following an "8010 Manual summit" held by CNSF in March 2019, the RMCs implemented all-hands training on several topics, including the ability to operate quick-disconnects. [Encl 747, 748, 1055]

1098. The closure memorandum sent to the DCBOD on 18 November 2019 by the CNSF DC Officer regarding current risk assessment policies governing make-up and number of duty sections stated that Ship's Force personnel are meeting requirements for an effective IET. The only discrepancy noted is that in some cases, ships assign Fire Marshals to man a watchstation contrary to NTTP 3-20.31, which was being addressed by CNSF drafting a Fire Marshal Instruction to clarify duties and responsibilities. The CNSF DC Officer did not identify any other recommendations for duty section numbers or composition, nor did the response address differences during a shipyard maintenance period. [Encl 747, 748, 1056]

1099. On 11 March 2015, CNSP and Commander, Naval Surface Force Atlantic (CNSL) issued the current version of COMNAVSURFPACINST/COMNAVSURFLANTINST 3541.1A. The current instruction does not reference the 8010 Manual, but CNSP and CNSL have not issued any revisions. [Encl 747, 748, 1054, 1057]

1100. CNSP/CNSL have not issued any instructions regarding Fire Marshal duties and responsibilities. [Encl 747, 748, 1056]

1101. At the 4 December 2019 DCBOD meeting, CNSF provided an update to actions in presentation with no conversation on this topic recorded in the minutes. Training aspects were reported complete on 25 September 2019 and review of duty sections was reported as having been completed on 18 November 2019. At the same meeting, NAVSEA closed out action to audit all RMCs for hot work management by stating that Commander, Navy Region Maintenance Center (CNRMC) audits all RMCs during Fleet Maintenance Activity Assessments (FMAA). [Encl 1058, 1059]

1102. A USFF N43 staff member, (b) (6), noted that when the DCBOD was first constituted, they focused on closing actions from the MIAMI Fire Review Panel and met quarterly or more frequently. Over time, however, meetings occurred less frequently. [Encl 1050]

1103. On 29 February 2020, USFF N43, RDML William Greene, emailed Flag Officers, including CNSF, Commander, Naval Air Forces (CNAF), and Commander, Submarine Forces (SUBFOR), with a NAVSEA published report on fire protection and prevention to raise awareness of shipboard industrial fires. He noted that more than 300 fires occurred aboard ships from 2018 – 2019. This report highlighted common weaknesses of not following procedure, inadequate risk assessment, inadequate supervisory oversight, and failure to identify hazards. The report remarks further that "Commanding Officers and crews are an integral part of our maintenance teams and on the front lines of enforcing standards from general housekeeping to hot work." [Encl 1060]

1104. Following the December 2019 DCBOD, the next meeting occurred on 21 September 2020, after the BONHOMME RICHARD fire, with the following agenda items:

a. The meeting presentation includes OSCAR AUSTIN fire actions for closure, noting all actions were reported complete in November 2019. Action number three was for NAVSEA to review the oversight process for FRPs to ensure compliance with the 8010 Manual and NSTM 555. This was proposed for closure with no changes required, stating that the response plans are reviewed by RMCs semi-annually or annually and reviewed during 8010 Manual Chapter 13 drills and FMAA.

b. At the meeting, CNRMC and NAVSEA 04X briefed RMC and Naval Shipyard 8010 Manual audit findings. In the five 8010 Manual audits conducted since 2018 by CNRMC in the Continental United States (CONUS) RMC Southeast Regional Maintenance Center (SERMC), Mid-Atlantic Regional Maintenance Center (MARMC), Southwest Regional Maintenance Center (SWRMC), Northwest Regional Maintenance Center (NWRMC) a

total of five significant findings were reported. In the three Naval Shipyard 8010 Manual audits conducted since 2018 by NAVSEA 04, a total of 54 significant findings were reported. No further discussion or information was available to explain the disparity between Naval Shipyards and RMCs.

c. No discussion or actions related to the IWO JIMA fire or subsequent command investigation occurred in the sole DCBOD that occurred since that investigation concluded in May 2020. Additionally, a USFF N43 staff member, (b) (6) , noted that the DCBOD encountered difficulty tracking down the final command investigation report for that particular fire.

[Encl 481, 1050, 1061, 1062]

1105. The USFF N43, RDML Greene, noted that DCBOD meetings prior to the fire aboard BONHOMME RICHARD focused on long-term items resulting from the 2017 collisions involving USS FITZGERALD (DDG-62) and USS JOHN S MCCAIN (DDG-56). [Encl 752]

1106. On the USFF N43 staff, (b) (6) , stated that command investigations for DC issues or fires aboard naval vessels are not automatically provided to the DCBOD. When investigations are provided, the DCBOD staff discusses with the Deputy Fleet Maintenance Officer whether the DCBOD engages on certain incidents not formally routed for consideration. Because he assessed the fire on IWO JIMA did not occur while the ship was in an industrial environment, further engagement on this incident by the DCBOD did not occur. [Encl 1050]

1107. A July 2020 assessment of MIAMI fire corrective actions performed at direction of Commander, Submarine Force Atlantic (COMSUBLANT) and Commander, Submarine Force U.S. Pacific Fleet (COMSUBPAC), the SUBFOR Director of Submarine Safety noted that: “the submarine damage control improvement process is ad hoc, ineffective, and unlikely to be altered by the USFF DCBOD. Therefore, COMSUBLANT and COMSUBPAC should coordinate with NAVSEA and take steps to address damage control improvement ‘kill chain’ shortfalls.” This assessment was completed shortly before the BONHOMME RICHARD fire. [Encl 762]

D. NAVSEA Policy Development and the 8010 Manual

The 8010 Manual was created after MIAMI to capture all fire safety requirements in one source. It assigned both programmatic roles and technical requirements across the involved commands. At the time of the BONHOMME RICHARD fire, it was the key reference for ship and maintenance activities to ensure a ship’s fire safety.

1108. On 26 July 2012, the first in a series of joint serial messages was released by NAVSEA and CNIC (concurred to by PACFLT, USFF, and NAVSEA 08) to direct action incorporating lessons learned from the MIAMI fire. Ten total joint serial messages were released, some of which were submarine specific and others applicable to all commissioned ship availabilities. [Encl 1063, 1064, 1065, 1066, 1067, 1068, 1069, 1070]

1109. Four working groups provided recommendations for the serial messages and promulgated long-term changes: the emergency planning and fire drill working group led by a NAVSEA

representative from PNSY; the Industrial Process Working Group led by a representative from NAVSEA 04X; the firefighting process working group led by CNIC N30; and, the technology working group led by a Technical Warrant Holder (TWH) from NAVSEA 05P. [Encl 1063, 1064, 1065, 1068, 1069, 1070]

1110. The serial messages directed Naval Supervising Authorities (NSA) to implement changes on applicable ship classes (either submarines or all commissioned ships) in all availabilities when invoked in repair contracts. [Encl 1063, 1064, 1065, 1068, 1069, 1070]

1111. Long-term sustainment of the actions developed in the serial messages sought to codify all actions in OPNAVINST 11320.23G, CNIC and Region instructions, NSTM 555 and in creating the 8010 Manual. [Encl 1067]

1112. MIAMI Fire Review Panel recommendation 22 directed NAVSEA to develop a single formalized doctrine for fighting fires on ships in port or industrial environments. RADM Richard Berkey, USFF N43, signed item 22 for closure on 7 April 2014 after issuance of the 8010 Manual. [Encl 1021, 1071]

1113. The direction from VADM Kevin McCoy, Commander, NAVSEA, for the 8010 Manual was to create a manual similar in scope to the 6010 Manual. [Encl 481, 934, 1072]

1114. (b) (5)

1115. The NAVSEA 05 TWHs involved in writing the 8010 Manual were (b) (6), NAVSEA 05P5 TWH for DC and Personnel Protection — Ships, (b) (6), NAVSEA 05P5 TWH for Damage and Fire Recoverability — Ships, and (b) (6), NAVSEA 05P5 TWH for Fire Protection Services — Ships. [Encl 191, 340, 893, 932]

1116. By May 2013, a draft of the 8010 Manual from NAVSEA 04 was provided to NAVSEA 08 for a final review. During this time period, VADM William Hilarides assumed duties as Commander, NAVSEA, which coincided with an increased interest in controlling costs. In December 2013, the 8010 Manual was briefed to primary stakeholders, Program Executive Officer (PEO) Carriers, PEO Submarines, and NAVSEA 21. During the final reviews, language was inserted by NAVSEA stakeholders to make allowances for cost and schedule. The mandate to incorporate cost and schedule considerations into the decision-making process on how to execute these new requirements within the 8010 Manual was neither contained within the initial drafts nor present in the 6010 Manual. [Encl 191, 934]

1117. On 6 February 2014, Commander, NAVSEA, VADM Hilarides, issued letter Ser 04-017/198, promulgating guidance for the issuance of the 8010 Manual and directing its implementation by Naval Shipyards and RMCs within 180 days of receipt. This guidance states:

> a. CNRMC was charged with initiating changes to NAVSEA Standard Items (NSI) to invoke the requirements of the 8010 Manual at private shipyards. CNRMC was directed

to change processes and procedures as necessary to implement the 8010 Manual for contracted availabilities and provide NAVSEA feedback as necessary.

b. Promulgation guidance states that the 8010 Manual integrates and complies with fire safety responsibilities of a ship's CO contained in Chapter 8 of U.S. Navy Regulations.

c. The 8010 Manual was created to be integrated with, and taking precedence over, the General Overhaul Specifications for Overhaul of Surface Ships, General Overhaul Specifications for Deep Diving SSBN/SSN Submarines, 6010 Manual and COMUSFLTFORCOMINST 4790.3.

d. The 8010 Manual formally supersedes requirements established in MIAMI fire serial messages.

e. All Ship Repair and/or Construction Activities (SRCA) should identify and document costs associated with implementation and report these to the appropriate NSA/or Lead Maintenance Activity (LMA). NSAs should ensure costs are properly identified to customers and Navy budget submitting offices.

[Encl 1073]

1118. In the Commander's Guidance included in the 8010 Manual, VADM Hilarides states, "[i]t applies to all Ship Repair and/or Construction Activities (SRCA), both public and private, and to all ship availabilities." [Encl 1074]

1119. On 10 March 2014, NAVSEA 04X and NAVSEA 04R tasked CNRMC with reviewing the 8010 Manual and invoking the 8010 Manual requirements by modifying the relevant NSIs. This was submitted for closure of MIAMI Fire Review Panel item 22: "NAVSEA develop and issue a single formalized doctrine for fighting fires on ships in port or in industrial environments." [Encl 1075]

1120. A brief to DCBOD on 4 April 2014 notes the 8010 Manual was approved by NAVSEA with an added Commander's Intent to "communicate judiciousness and flexibility during implementation." The brief states that the intent is to balance costs and risks associated with requirements during implementation, and also requires a Memorandum of Agreement (MOA) to document agreements on how to implement for each ship availability. [Encl 1076]

1121. In April 2014, a meeting was held by CNRMC to review the 8010 Manual for incorporation of applicable elements into the NSIs. The working group involved Safety (Code 106) and Operations (Code 300) personnel from RMCs and only changed items deemed necessary and cost efficient for contractor accomplishment. [Encl 1072, 1077]

1122. During the April 2014 meeting, many items were determined not to be contractor responsibilities. Some of these items, such as Fire Safety Watch (FSW) requirements and training, state that CNRMC direction may be necessary to ensure 8010 Manual requirements are met. Other items are recommended to be addressed during the Integrated Project Team Development (IPTD) process. [Encl 1077]

1123. Navy Regional Maintenance Office (NRMO), embedded with the RMCs until 2018, initially coordinated with NAVSEA to push early 8010 Manual requirements into the NSIs, so the requirements could be enforced throughout NAVSEA. The former Director of NRMO in San Diego, (b) (6), acknowledged that some items were incorporated into future NSI versions; however, other items were not folded in. [Encl 925]

1124. On 16 June 2014, Change 1 to the Fiscal Year (FY)-15 NSI was issued to incorporate applicable 8010 Manual requirements. This change modified NSI 009-06, 07, 06, 28, 35, 70 and 74, which are required to be invoked for all availabilities beginning in Fiscal Year (FY) 15. [Encl 1078]

1125. NAVSEA and CNRMC leadership were aware that not all 8010 Manual requirements were implemented at private shipyards because the NSIs did not require wholesale invocation of the 8010 Manual. This gap in invocation was intentional because of a concern about cost. [Encl 463, 470, 781]

1126. Issuance of the 8010 Manual did not provide any funding for new requirements. [Encl 151, 191, 879]

1127. NAVSEA transmitted a Program Objective Memorandum (POM) submission in each budget cycle following release of the 8010 Manual, but none were approved by OPNAV. CNRMC routed an issue paper for POM 19, dated 1 September 2016, requesting funding for MARMC and SWRMC Fire Safety Officers (FSO), which was subsequently rejected. The follow-on note associated with this POM rejection by OPNAV informs "clarification from NAVSEA 04X states the FSO requirement was not a dedicated individual to meet the requirements of the 8010 Manual." [Encl 879, 1079]

1128. MIAMI Fire Review Panel action number 6 directed NAVSEA to coordinate with TYCOMs to establish standardized cleanliness and stowage policies for industrial availabilities. This action was included in the 8010 Manual. [Encl 1020, 1021, 1049]

1129. MIAMI Fire Review Panel action number 28 directed NAVSEA to coordinate with CNIC and TYCOMs to establish common wireless communications network for integrating response between Ship's Force, shipyard, and federal and mutual aid Fire and Emergency Service (F&ES) organizations. This item was signed for closure by RADM Richard Berkey, the USFF N43, on 7 April 2014 stating that radios are required by 8010 Manual section 8.7, which requires the NSA to ensure each vessel undergoing maintenance would have minimum of five such radios at the Quarterdeck or DC Central. The closure document states that radios shall be tested daily and exercised during regularly scheduled fire drills. Finally, the memo states that "all radios are in place." [Encl 1080]

1130. Ownership of the 8010 Manual belongs to NAVSEA 04, though there is no TWH associated with the 8010 Manual. The Acting Director of NAVSEA 04, (b) (6), stated that her organization owns the 8010 Manual because it is an industrial process while also adding that NAVSEA 04 would work with NAVSEA 05 TWH for any arising issues. [Encl 878]

1131. (b) (6), who was in NAVSEA 04XQ, predecessor to current NAVSEA 04X6, stated that he was assigned ownership of the 8010 Manual because the organization already owned the 6010 Manual and NAVSEA leadership decided to put ownership of the 8010 Manual in the same hands. He retained control of the 8010 Manual throughout his tenure in that position. [Encl 1072]

1132 (b) (6) (b) (6)

1133. The Executive Director for NAVSEA Engineering Directorate SEA 05B, (b) (6), asserted the 8010 Manual is a technical document. He further stated that while ownership of the 8010 Manual resides within NAVSEA 04, the execution of technical warrants and expertise for fire protection, DC, and suppression systems resides in the office of NAVSEA 05P. (b) (6) expected 8010 Manual deviations would be adjudicated through a waiver requested to NAVSEA, with correspondence between NAVSEA 04 and NAVSEA 05. He acknowledged there is no a clearly defined deviation process from the 8010 Manual for RMCs and noted it is abnormal for a technical document to have cost and schedule allowances for deviations. He also had no knowledge of any Hazard Assessment Reports (HARs) being generated for any 8010 Manual non-compliances. [Encl 931]

1134. None of the NAVSEA 05P5 TWHs with 8010 Manual equity ((b) (6), (b) (6), and (b) (6)) have been asked to approve any Departure From Specification (DFS) related to the 8010 Manual nor have they been asked to perform any HAR. [Encl 191, 340, 893]

1135. The NAVSEA 05P5 TWH for fire protection services, (b) (6), assessed the 8010 Manual has been effectively turned into guidance by having the language allow for considerations on the basis of cost and practicality. She noted there is constant pushback against the 8010 Manual due to cost concerns. [Encl 191]

1136. The term SRCA was created in the 8010 Manual as a single catch-all term. The term was intentionally developed by writers to assign 8010 Manual functions to the organization owning the civilian workforce and equipment. The 8010 Manual uses the SRCA term to define the activity that performs industrial work (maintenance, repair, modernization, inactivation, and/or construction) during an availability. [Encl 879, 1072]

1137. The CNRMC Technical Director from 2011 – 2019, (b) (6), recalled making his opinions known that the SRCA term would not work well in the private sector, but the decision to include the term was made within NAVSEA. [Encl 879]

1138. The CNRMC Safety Manager, (b) (6), thought the term SRCA could be interpreted as either the RMC or the prime contractor as it is written in the 8010 Manual. In FMAA audits, he had made no finding indicating SWRMC was inappropriate in assuming SRCA functions and responsibilities of the 8010 Manual. [Encl 580, 1081, 1082]

1139. (b) (6), Acting Director of NAVSEA 04 and former CNRMC Executive director, thought the LMA functions as the SRCA, as the 8010 Manual clearly defines. [Encl 878]

1140. NAVSEA 04 performs audits every two years on each Naval Shipyard for implementation of the 6010 and 8010 Manuals. These audits, which are conducted by a large team, include NWRMC and Hawaii RMC, which include Puget Sound Naval Shipyard (PSNS) and Pearl Harbor Naval Shipyards. [Encl 883, 934, 1083, 1084]

1141. CNRMC performs audits of RMCs as part of the FMAA. There is one person in CNRMC, currently (b) (6), who performs all safety portions of this assessment, though he sometimes has one assistant. The fire safety assessment is conducted as a subpart of the overall safety assessment. FMAAs are nominally performed every 18 months, not to exceed 24 months, in accordance with CNRMCINST 4790.12B. [Encl 580]

1142. The NAVSEA 05P Fire Protection Engineering Manager, (b) (6), participates in some Naval Shipyard audits, but has not participated in an audit at an RMC. [Encl 191, 1083]

1143. NAVSEA 05 maintains a local Engineering Field Representative (EFR) for NAVSEA in San Diego who supports the technical authority process. The EFR has not been involved in any issues involving 8010 Manual implementation or availability compliance. [Encl 1085]

1144. Following an inquiry about 8010 Manual compliance in the private yards by RDML Scott Brown, PACFLT N43 staff, (b) (6), responded via email on 31 July 2019, stating that a gap analysis was performed approximately two years prior between the 8010 Manual and NSIs. The email and supporting documents note:

> a. 26 requirements of the 8010 Manual were initially identified for which no contractor requirement was identified.
>
> b. USFF addressed all 26 items and found that for 21 items are contained within NSI or other requirements.
>
> c. 5 items were determined to be requirements that are the responsibility of Ship's Force. These items are ammunition (5.2.6), AFFF (7.1.6), securing brow (10.1.5), egress route marking (10.2.4) and record of boundary openings (11.1.6).
>
> d. USFF report considered risk associated with each gap to be low, and PACFLT staff concurred.

[Encl 1086, 1087, 1088]

1145. NAVSEA letter Ser 00/057 issued on 21 February 2020 provided an assessment of safety programs, which focus on fire protection and prevention in 2018 – 2019. This study was performed based on several fires occurring in various shipyards and fire safety concerns raised on FITZGERALD. Of note:

a. 339 total fires reported in those two years across all maintenance providers, with 173 attributed to hot work.

b. Human factors analysis of root causes was performed to find common causes; top causes were found to be procedural compliance, inadequate risk assessment, and lack of command or supervisory oversight.

c. The 8010 Manual, or its requirements, was not referenced or addressed in this document.

d. Distribution was directed to organizations who perform ship repair. DCBOD organizations outside of NAVSEA were not included on formal distribution.

[Encl 1089, 1090]

1146. On 25 February 2020, RDML Greene, USFF N43, and RDML Brown, PACFLT N43, engaged via email to discuss recent fires. A follow-on internal PACFLT N43 discussion further inquired into why shipyards were not sufficiently following the 8010 Manual. In addition, it notes that based on conversation with Naval Surface Warfare Center, Philadelphia Division (NSWCPD) Damage and Fire Recoverability, In Service Engineering Agent's (ISEA's) private yards only have standard items contractually invoked and not the 8010 Manual. [Encl 1091]

1147. On 27 February 2020, an email from RDML Brown to RDML Greene discusses fire safety and notes his staff performed a review of the 8010 Manual in surface private shipyards following the 2019 DCBOD meeting. RDML Brown discusses having been told private shipyards are meeting 8010 Manual requirements through NSIs, with some discrepancies in crew requirements; however, overall requirements were being met. [Encl 1092]

1148. RDML Brown stated that he had inquired and was satisfied that Commander, U.S. Pacific Fleet (COMPACFLT) was well covered by requirements in NSIs. [Encl 481]

1149. RDML Brown stated that, in his experience, he thought the intent of the 8010 Manual was for the LMA to be involved with the Fire Safety Council (FSC). [Encl 481]

1150. A 2020 assessment of MIAMI fire corrective actions, which were performed at the direction of COMSUBLANT and COMSUBPAC, the SUBPAC Director of Submarine Safety noted that that 8010 Manual has been inconsistently implemented, applied, and overseen. As a result, this has created risk not readily apparent to Submarine Force leadership. It further notes that neither a private shipyard, which conducts new construction nor other availabilities, fully implement the 8010 Manual. [Encl 762]

E. Ship's Force Firefighting Doctrine and NSTM 555

Navy firefighting doctrine is trained at various stages in a career and codified in NSTM 555. This is the key reference BONHOMME RICHARD Sailors had to follow when responding to the fire.

1151. Miami Fire Review Panel recommendation number five directed NAVSEA to revise shipboard firefighting doctrine (e.g., NSTM 555, Federal Firefighter Standard Operating Procedures (SOP), etc.) to incorporate unique industrial environment considerations. This was accomplished for surface vessels by revising NSTM 555 Volume 1 and OPNAVINST 11320.23G. [Encl 1020, 1021]

1152. On 30 August 2014, revision 14 for NSTM 555 Volume 1 was published, allowing NAVSEA to submit MIAMI Fire Review Panel item 5.1 for closure. This revision added new sections 555-8.16 and 555-8.17 to the NSTM, addressing firefighting while pierside and in overhaul, fulfilling an action resulting from the 2012 MIAMI fire. [Encl 1093]

1153. COMNAVSURPAC issued a message on 6 October 2016, which directs implementation of the 8010 Manual Advance Change Notice (ACN) 1A for surface ships and reports that NSTM 555 had been revised in August 2014 to incorporate 8010 Manual requirements, including in port firefighting pierside and in dry dock. The message did not direct any training, drilling, or reporting actions regarding 8010 Manual changes. [Encl 1094]

1154. Revision 14 of NSTM 555, Section 8.16 was introduced in response to the MIAMI Fire Review Panel. Section 8.16 identified the risk associated with the presence of repair and maintenance work being performed, which increases the potential for fire. Additionally, this section clarifies command and control relationships and the role of local F&ES in a pierside environment, consistent with the command and control relationships described in the 8010 Manual. The revised 2014 version of NSTM 555 also added a new section 8.17 (Firefighting while ship is in dry dock). [Encl 1020, 1021]

1155. BONHOMME RICHARD personnel who stood Duty Fire Marshal were not familiar with these NSTM 555 updates. Four personnel who stood watch as Duty Fire Marshal, including the Ship's Fire Marshal and the interim Ship's Fire Marshal, stated that they were generally unfamiliar with the reference material they should have used when executing their daily duties and responsibilities. These personnel had a general unfamiliarity with the content of the 8010 Manual and commented that their training had not prepared them to combat a fire of the magnitude having occurred aboard BONHOMME RICHARD. [Encl 61, 62, 171, 174, 243, 415, 496, 530, 531]

1156. Also of note, NSTM 555 only discusses fires in large compartments of the Landing Platform/Dock (LPD) 17 ship class. The NAVSEA Failure Review Board (FRB) also noted that NSTM 555 lacks a section on fighting fires in large vehicle compartments, such as the Lower Vehicle Stowage Area. [Encl 191]

Fleet Training Requirements

1157. In addition to the Level 0 and Level I requirements, OPNAVINST 3541.1G also requires personnel to attend Level II – Advanced training based on specific duty assignments. Personnel who are required to attend additional Level II training include, but are not limited to: engineering department personnel; petroleum, oils, lubricant and ordnance personnel; Surface Warfare qualified enlisted personnel; division and department Damage Control Petty Officers (DCPO); gas free engineers; engineering department principal assistants; Main Propulsion Assistants (MPA), auxiliaries officers, electrical officers; repair and fire party leaders; IET members; Damage Control Repair Station (DCRS) personnel; Rescue and Assistance (R&A) detail team members; rapid response and Flying Squad members; and, (13) Damage Control Assistant (DCA) and DCA senior enlisted. The above requirements are applicable to the majority of personnel aboard a U.S. Navy combatant vessel. These requirements are primarily met through the accomplishment of the requisite Personnel Qualification Standard (PQS). [Encl 1095]

Per OPNAVINST 3541.1G, all Sailors, regardless of duty assignment, should receive Level 0 – Familiarization training while at NAVCRUITRACOM (Enlisted Boot Camp) in Great Lakes, Illinois. This one-time training covers general familiarization with DC and survivability to include: ship and submarine design for survivability; hull structure familiarization; prevention and control of fire; flooding and explosive damage; equipment familiarization; chemical, biological, and radiological defense (CBRD); survival skills; DC drills; and, use of CBRD gas confidence chamber.

OPNAVINST 3541.1G also requires all shipboard (and submarine) assigned personnel (officer and enlisted) to continue through the Level 0 training continuum to Level I – Basic Ships and Submarines. This training, which is held primarily at the Naval Service Training Command (NSTC) Firefighter Trainer at Surface Warfare Officers School (SWOS) Unit, co-located in Great Lakes, IL, is conducted prior to arrival at the fleet unit when practicable, but no later than three months following arrival at the fleet unit. This training includes proper techniques and procedures for combating various classes of fires as well as instruction on personnel protective equipment, chemistry of fire, portable fire extinguishers, and the Self-Contained Breathing Apparatus (SCBA). This course includes live firefighting training, defined as human interaction in the manual extinguishment of unconfined open flames through use of appropriate fire extinguishing agent(s).

1158. Naval Education and Training Command (NETC) currently provides seven specific courses of instruction on shipboard firefighting, offered across 10 locations (Newport, RI; Bangor, Washington; Mayport, Florida; Rota, Spain; Pearl Harbor, Hawaii; Yokosuka, Japan; Sasebo, Japan; Norfolk, Virginia; San Diego, California; Great Lakes, Illinois). In San Diego, NETC provides six courses of instruction for Shipboard Firefighting at its NBSD facility. The listed facilities provide multi-level force fueled live firefighting trainers providing Sailors and Department of Defense (DoD) civilian's instruction and familiarization with different levels of firefighting experience and use of assigned Personal Protective Equipment (PPE). [Encl 1096, 1097, 1098, 1099, 1100, 1101, 1102]

1159. The General Shipboard Fire Fighting Training Course (A-495-0416/ A-495-2829) provides instruction and evaluation to Officers and Enlisted personnel in firefighting equipment and procedures as well as preparing personnel to qualify as members of a Shipboard DC Organization/Team. This course satisfies the Level I five year live firefighting requirement of

Shipboard Survivability Training Level Requirements in accordance with OPNAVINST 3541.1 (series). [Encl 1100]

1160. The Advanced Shipboard Fire Fighting Course (J-495-0419) provides training to supervisory fire party personnel in advanced firefighting techniques and effective management of on-scene personnel in a shipboard environment, as well as practical experience with various DC and firefighting equipment. [Encl 1098]

1161. The DC Repair Locker Leader Course (K-495-0040) trains personnel in advanced DC theory and techniques necessary to fill Repair Party Leader Billets in the shipboard DC organization and facilitate the proper management of repair party personnel in casualty situations under all shipboard readiness conditions. This course is required for all IET repair party leaders, repair locker repair party leaders and fire marshals to be qualified. [Encl 1097]

1162. The DC Assistant-Senior Enlisted (DCASE) School (A-4G-1111) establishes and provides a continuum of professional DC training in support of ship survivability requirements preparing United States Navy (USN) and United States Coast Guard (USCG) officers and senior enlisted to serve at sea in senior DC leadership positions. [Encl 1096]

1163. The Shipboard Firefighting Integrated Team Trainer (A-495-0018) is designed to provide instruction and evaluation to officers and enlisted personnel in team-oriented firefighting tactics and procedures. Students receive training in high temperature, high intensity, and multi-space fires. The purpose of this course is to train a ship's fire team(s)/DCRS team(s) to work as a cohesive team to be proficient in case of an emergency aboard the ship. Ships are not allowed to send individuals or partial teams to the training. [Encl 1101]

1164. The Shipboard Firefighting/DC Emergency Team Trainer (A-495-0021) is intended to provide instruction to personnel assigned to a Shipboard Emergency Team, including positions such as On-Scene Leader, Team Leader, Locker Leader, Investigator, Nozzleman, Hoseman, Plotter, Phone Talker, Messenger, Accessman/Boundaryman, Plugman, Active/Post Fire Desmoking, and Electrical/Mechanical Isolation. Satisfactory completion of this course meets requirements for OPNAVINST 3541.1 (series) Level III survivability training. Per SWOS DC/Firefighting Director, this course has not been actually administered. [Encl 1102, 1103]

1165. There are currently no courses of instruction offered under NETC/ Surface Warfare Schools Command/Surface Warfare Officers School (SWSC/SWOS) that are specific to firefighting or the practice of DC in an industrial shipyard environment. According to the current SWOS N79 Director of DC and Firefighting Schools, CDR Tristan Oliveria, many of the schools provided by SWOS/SWSC incorporate some elements of firefighting practices in industrial shipyard environments as part of their curriculum. He thinks that the current courses of instruction provides satisfactory training for firefighting in all shipboard status variants to include underway, in port pierside, in dry dock and undergoing shipyard overhaul. [Encl 1103]

1166. SWOS reviews and validates the firefighting school curriculum on a cyclical basis. Their current assessment is that the courses provide sufficient instruction. There is no plan to revise or

add additional courses specific to the industrial shipyard environment-based firefighting and DC. [Encl 1103]

1167. In 2015, (b) (6), the Damage and Fire Recoverability (DFR) TWH, attended Basic and Advanced Shipboard Firefighting courses in Norfolk, Virginia at Farrier Firefighting School to review the courses ensuring technical accuracy and currency. During the course of this visit, (b) (6), the DFR TWH, observed students performing live firefighting training and identified a number of external influences adversely affecting the quality of training being provided to the Sailor. In a report prepared for USFF and CNSP, (b) (6), the DFR TWH, concluded that there were five major external influences affecting those courses: environment concerns with emissions; risk averse training culture, monetary budget; demands for increased Sailor number turnout; and, course length constraints. [Encl 1104]

1168. The DFR TWH, identified specific concerns relating to the use of propane fuel as the medium for fueling the fire trainer. He noted that the use of propane presents limitations not in keeping with real-world firefighting tactics. Using propane as a fuel does not allow for production of smoke or the stratified upper layer of heat produced by other fuel sources. As a result, students are not exposed to the heat associated high in the space prompting Sailors to "stay low" in the space, as would be required in an actual fire. Moreover, the lack of smoke does not allow for visibility limitations produced in an actual firefighting situation. The lack of smoke also hinders training on the proper use and methodology of employing the Naval Firefighting Thermal Imager (NFTI), a critical tactic in shipboard firefighting. The lack of smoke also does not allow the Sailor the opportunity to employ smoke curtains and boundaries to the control of smoke. Additionally, propane fires are not actually extinguished by Sailors in training, but are controlled by the training staff to allow for class time efficiency. This tactic deprives the Sailor the opportunity to practice the judicious use of water that is required in shipboard firefighting practices. [Encl 1104, 1105]

1169. Ultimately, the DFR TWH recommended fleet leaders revisit the realism and situational challenges afforded to the Sailor by current firefighting training in an attempt to better prepare Sailors to react to future real fire events. [Encl 1104]

1170. (b) (6), the Deputy Director (N79) of the DC & Firefighting Training, SWSC since 2015, stated that as a result of (b) (6)'s report, SWSC reviewed various aspects of DC training, one of which was the use of propane fuel. In coordination with various stakeholders, including NAVSEA and Planned Maintenance System (PMS) 339 (who manage maintenance contracts for DC trainers), SWSC reviewed the best fuel medium for potential use, considering EPA limitations on types of allowed fuel. The Deputy Director (N79) of the DC & Firefighting Training, stated that after this review, 9 of 10 stakeholders concluded propane was the best option. [Encl 1105]

1171. The Deputy Director (N79) of the DC & Firefighting Training, noted that any discussions regarding realism challenges in trainers should be taken with a grain of salt, because the trainers were built back in early 1990s. The oldest trainer was built in 1985. He acknowledged that the shipboard firefighting trainers absolutely do not mimic all realistic ship layouts, and SWSC is

continuously considering ways to modify the trainers. He stated that the SWSC is proposing to build new trainers at all the facilities. [Encl 1105]

1172. The Deputy Director (N79) of the DC & Firefighting Training, stated that following DFR TWH's report, SWSC recognized that some of the drill sets in the DC courses were not comprehensive to ensure they were accordingly evaluating students' performance. As a result, the SWSC re-adjusted all DC courses to better reflect NSTM 555 and NSTM 079 firefighting procedures. The Deputy Director (N79) of the DC & Firefighting Training was not able to provide specific examples of changes. [Encl 1105]

1173. In regard to schoolhouse training on firefighting in an industrial/dry dock environment, the Deputy Director (N79) of the DC & Firefighting Training, mentioned that some pierside drill scenarios are somewhat inlaid into the repair locker leader and DCASE course. He noted that the live trainers do not incorporate elements of pierside firefighting. He noted that the trainer does not currently involve multiple entity attacks or integrated firefighting with FEDFIRE or mutual aid partners. He went onto say that SWSC has been considering including more training on pierside firefighting as well as integration with an outside entity. [Encl 1105]

1174. The Deputy Director (N79) of the DC & Firefighting Training, stated that SWSC has integration with FEDFIRE at some of its training sites as well as Memorandum of Understandings (MOU) with FEDFIRE at some sites, such as the Mayport training site. He stated that he has been in contact with San Diego FEDFIRE to establish MOUs for more integrated training between SWSC and FEDFIRE, and FEDFIRE was interested. He also received a request from CNIC N30, (b) (6) , requesting a holistic MOU between FEDFIRE and all SWSC training sites. That request is currently being worked through NETC. [Encl 1105]

1175. Finally, the Deputy Director (N79) of the DC & Firefighting Training, noted that instruction on 8010 Manual drill requirements is embedded in the DCA course curriculum. There are no drill scenarios specific to the 8010 Manual, but SWSC is looking to build 8010 Manual scenarios. They just developed a larger scale 8010 Manual lesson, which was piloted and included a two-hour lesson topic on the 8010 Manual. [Encl 1105]

F. CNIC Policy Development after the MIAMI Fire

1176. MIAMI Fire Review Panel recommendation 5.3 directed NAVSEA to revise shipboard firefighting doctrine, including "Federal firefighter SOPs" to address industrial environment considerations. CNIC was assigned responsibility for completing this action item. [Encl 1021]

1177. Between July and October 2012, CNIC N30 issued four F&ES advisories (CNIC HPD Advisories 2012-01, 2012-02, 2012-03, and 2012-4) to address the MIAMI Fire Review Panel's recommendations. Among the requirements established in these advisories:

> a. HPD 2012-01 (24 July 2012): Required procuring mobile SCBA refill capability, performance of safety walkthroughs on ships in availability, and required six hours of training per firefighter per month of training on shipboard firefighting (three of which were required to be aboard).

b. HPD 2012-02 (30 August 2012): Issued to direct standardizing firefighting equipment requirements for all CNIC F&ES departments.

c. HPD 2012-03 (21 September 2012): Directed assignment of F&ES personnel in locations responding to ships the shore-based firefighter requirement (F&ES 09) and development of pre-fire plans for each class of ship (at shipyards and homeports) that may be encountered and include in local standards of cover.

d. HPD 2012-04 (23 October 2012): Directed PNSY, Naval Submarine Base Kings Bay, and Naval Station Everett to increase on-duty F&ES emergency responders.

[Encl 1106]

1178. HPD Advisories represent formal policy, and HPD 2012-01, 2012-02, and 2012-03 all state that the listed requirements "will be incorporated (or updated) into proper guidance documents (notices or instructions) during next review cycles." [Encl 687, 1106]

1179. FEDFIRE SOPs do not represent formal policy or doctrine and are viewed as "very specific procedures to implement policy, guidance, and doctrine." [Encl 1021]

1180. Metro San Diego FEDFIRE, a combination of the four naval installations in San Diego, issued Standard Operating Guide (SOG) 176 (Shipboard Firefighting) on 10 October 2012 to reflect shipboard firefighting as being a core mission requirement of installation F&ES departments. The SOG does not include or reference the pre-fire plans for each class of ship as directed by CNIC N30 advisory 2012-03 (21 September 2012) nor was it included or referenced in their policies. [Encl 1106, 1107]

1181. SOG 176 is still in effect and has not been updated since 2012 to account for issuance of OPNAVINST 11320.23G, the 8010 Manual, or OPNAVINST 3440.18. [Encl 940]

1182. When OPNAVINST 11320.23G was published on 4 February 2013, NAVSEA submitted MIAMI Fire Review Panel item 5.3 to CUFFC N43 for closure. The revised instruction: standardizes F&ES at naval installations, establishes shipboard firefighting as a core mission for CNIC installation fire departments, and provides general requirements for shipboard training. The instruction did not incorporate HPD 2012-01's requirement for a specific number or periodicity of shipboard training hours. [Encl 1049, 1106]

1183. The CNIC N30 issued HPD advisory 2014-01 on 17 March 2014 to address proficiency and annual training requirements for shipboard emergency response. This advisory replaced the training guidance contained in NAVSEA serial message 1 and CNIC advisories 2012-01 and 2012-03. This HPD advisory documents closure of several outstanding MIAMI Fire Review Panel recommendations by the DCBOD. Among the requirements included in this advisory:

a. CNIC F&ES Department personnel (firefighters, fire officers, fire chiefs) subject to respond to shipboard emergencies shall be assigned F&ES 09-Shore-Base Shipboard Firefighter duty task in the F&ES Training System (Enterprise Safety Applications Management System (ESAMS)).

b. Revised minimum requirement for shipboard F&ES training is 28 hours per year, to include minimum of 10 hours aboard the classes of ships on the installation.

c. F&ES proficiency training would focus on installation's shipboard emergency response plan execution and include following general and hazard-specific requirements:

(1) Practical exercises with Ship's Force to proactively integrate firefighting proficiency.

(2) Capabilities of the ship's onboard firefighting systems and strategies to use onboard standpipes as a first resort.

(3) Firefighting procedures when ship is in industrial maintenance environment with associated industrial hazards.

(4) Practical hose line deployment and advancement to specific ship space location.

(5) Strategies of establishing integrated hose teams of Ship's Force, F&ES, and mutual aid early to ensure safe and effective long-duration suppression operations.

(6) Hose team relief process to keep hoses staffed during extended operations.

[Encl 945, 1080]

1184. On 11 March 2016, the CNIC N30 issued advisory 2016-01 to address shipboard fire response planning and training of mutual aid partners. This advisory documents closure of several remaining MIAMI Fire Review Panel recommendations. Among the requirements included in this advisory:

a. Installations must develop comprehensive shipboard pre-fire plans for each ship class assigned in department's standards of cover. Each SRCA is responsible to have external emergency response plan. Advisory directs the development of comprehensive Individual Action Plan (IAP) tailored to specific berth locations with priority on industrial environment.

b. Region fire chiefs would provide oversight to ensure comprehensive IAP developed by each SRCA (Naval Shipyard (NSY), RMC or Fleet Maintenance Activity (FMA)), installation supporting SRCA maintenance operations and installation.

c. Prime objective of F&ES IAP is to provide an integrated ship and shore-based effective firefighting force with a single Incident Commander (IC).

d. IAP shall be developed using procedures from the 8010 Manual, NSTM 555, and NFPA 1405 and include both ship condition and duty section staffing (daytime and after hours).

e. Ship's CO or representative is the designated IC. Senior F&ES Fire Officer and Project Officer would be co-located with IC.

f. Mandates use ship's firefighting system and tactics as much as possible.

[Encl 945]

1185. Contrary to direction contained in these advisories to be incorporated into proper instructions and policy documents by the next review cycle, the requirements contained in these advisories have not been codified in OPNAVINST 11320.23G or any other CNIC instructions. [Encl 687, 945]

1186. The requirements in the CNIC advisories are not incorporated into any Commander, Navy Region Southwest (CNRSW) or NBSD instructions. CNRSW FEDFIRE (b) (6) stated that CNRSW follows the OPNAVINST 11320.23G and there are no further implementing instructions at the region level associated with this instruction. [Encl 691]

G. Incident Response Planning and OPNAVINST 3440.18

1187. MIAMI Fire Review Panel recommendation 18 directed OPNAV to issue a directive for non-nuclear vessels mimicking the command and control organization for nuclear vessel casualties, including designation of Primary Commanders and Area Commanders. [Encl 1020, 1021, 1108]

1188. USFF was assigned primary responsibility for OPNAVINST 3440.18. A draft version ("OPNAVINST 34XX") was generated by a working group comprised of personnel from the fleets, naval shipyards, NAVSEA, CNIC, and TYCOMs. [Encl 1109, 1110]

1189. As contained in the Command Tasker System tasker package, in January 2015, USFF N43 tasked COMSURFLANT; Commander, Naval Air Force Atlantic (COMAIRLANT); and, COMSUBLANT with providing Flag Officer/Senior Executive Service level input to a draft version of the instruction. [Encl 1110, 1111]

1190. In February 2015, USFF N43 informed OPNAV N43 that review of the draft instruction was being delayed by OPNAVINST 3040.5E and a flag-level "All Hazards" Initiative. [Encl 1112]

1191. Following OPNAV N43's migration to OPNAV N83, no further action was taken on the instruction until spring 2017, when OPNAV N46 assumed ownership of the policy. [Encl 1111, 1112]

1192. In July 2017, the draft OPNAVINST 34XX was recirculated for action officer-level review by COMAIRLANT; COMSURFLANT; COMSUBLANT; and, USFF. The consolidated Action Officer Review included over 100 comments from 8 stakeholders: PACFLT N43; CNIC N37; NRSW N37; USFF N464; FFC N04NW; PSNS&IMF; PHNSY&IMF; and, CNRSE. [Encl 468, 1113]

1193. Among other comments, CNRSW N37 noted that the instruction's command and control structure was inconsistent with the established chain of command structure for hazard responses as defined in existing policy. CNRSW N37 expressed concern that the draft instruction "change[d] the titles and reporting responsibilities for a specific set of hazards and results in an exception to established incident response doctrine." CNRSW N37 further highlighted the "instruction results in the potential for multiple [command and control] structures and procedures to be in execution simultaneously which [would] likely result in significant confusion and loss of focused effort." On review by OPNAV N46 staff, CNRSW's above comments were rejected. [Encl 468]

1194. In July 2018, OPNAV N46 assigned COMAIRLANT; COMSURLANT; COMSUBLANT; and, USFF with Flag Officer/Senior Executive Service-level review of the draft OPNAVINST 34XX. The draft instruction also included organizational approvals from the following on or before 13 July 2018: OPNAV N96, RADM Boxall; OPNAV N83, (b) (6) ; USFF N43, RADM Whitney; USFF N43, RDML Greene; CNIC N3, (b) (6) ; and, NAVSEA 04X (b) (6) . [Encl 1114, 1115, 1116, 1117, 1118, 1119]

1195. On 13 November 2018, six years after the MIAMI Fire Review Panel recommended issuance of the directive, OPNAVINST 3440.18 was published. Consistent with the MIAMI Fire Review Panel recommendation, OPNAVINST 3440.18 designates Primary Commands, who have a responsibility to further designate area commands and establish their required responsibilities. For ports in the U.S. Indo-Pacific Command (like BONHOMME RICHARD on 12 July 2020) and the U.S. Northern Command Areas of Responsibility (AOR), primary command responsibility rests with PACFLT. [Encl 1020]

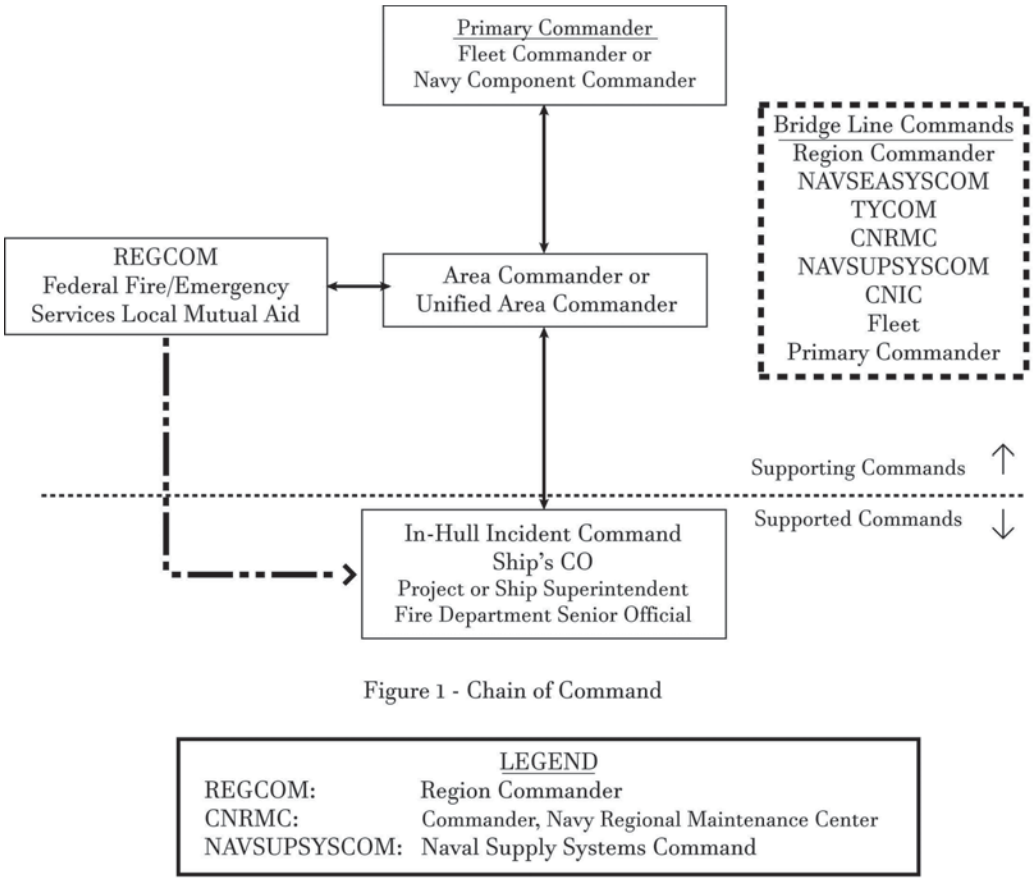

Figure 1 - Chain of Command

Figure 48 shows the incident command structure established under OPNAVINST 3440.18

1196. USFF issued Maintenance Duty Officer (MDO) Standing Order 326 to clarify that Commander Task Force 80CTF-80 is both the primary commander and supported commander for coordinating firefighting efforts for "shipboard fires while within a shipyard" and "while in an availability period." For "shipboard fires while within a shipyard," the standing order states that the primary commander has designated NAVSEA as deputy primary commander to assume responsibility for firefighting efforts. The standing order designates MARMC as area commander for shipboard fires while within a shipyard. For "shipboard fires while in an avail[ability] period," the standing order states that the primary commander has designated COMSURFLANT as deputy primary commander to assume responsibility for firefighting efforts, with the installation commander designated as area commander responsible for firefighting efforts as well as coordinating support to the ship, providing assistance for public affairs, liaison with civil authorities, logistics, engineering, environmental impact, safety, and health. [Encl 1120]

1197. After the BONHOMME RICHARD fire, USFF and PACFLT on 19 December 2020, formally designated area commanders in accordance with OPNAVINST 3440.18. Area commanders were designated as follows:

a. Naval Shipyards: The shipyard commander is the area commander. This includes shipyards on a naval installation with a separate CO.

b. Private Shipyards: The RMC commander (e.g., CNO availability) or Supervisors of Shipbuilding (SUPSHIP) (e.g., new construction) is Area Commander.

c. Naval Installations: The Installation Commander is Area Commander.

d. When OPNAVINST 3440.18 requires a Unified Command, establish a Lead Area Commander as follows:

(1) For ships in Pearl Harbor Naval Shipyard and PSNS, the Shipyard Commander is the Lead Area Commander with Base Commander supporting. For ships in Norfolk Naval Shipyard and PNSY, the Commander is dual-hatted as Installation Commander and Shipyard Commander.

(2) For ships in an industrial availability at a U.S. naval installation other than a naval shipyard, the installation commander is the Lead Area Commander with the NSA supporting.

(3) For ships at Ship Repair Facility-Japan RMC Yokosuka and Detachment Sasebo, the Installation Commander is the lead with the NSA supporting.

[Encl 1121]

1198. Outside of USFF's standing order and PACFLTCPF/USFF 21 December 2020 message, OPNAVINST 3440.18 has not been incorporated into any other policies or instructions. [Encl 481, 752]

1199. Neither the SWRMC Fire Response Plan (SWRMCINST 5100.11C dated 31 January 2020) nor MARMC Fire Response Plan (MARMCINST 11320.1D dated 22 July 20) reference OPNAVINST 3440.18. Additionally, the 8010 Manual does not incorporate OPNAVINST 3440.18, resulting in three distinct command and control structures. (See Figures 22, 23, and 48). [Encl 1122, 1123]

1200. Neither the NBSD Emergency Management (EM) plan (NAVBASESANDIEGOINST 3440.1L dated 11 October 2017) nor the EM Plan (CNRSWINST 3440.1B) OPNAVINST 3440.18. [Encl 240, 960]

1201. Expeditionary Strike Group THREE (ESG-3) Commander and Deputy Commander were also unfamiliar with OPNAVINST 3440.18 prior to the BONHOMME RICHARD fire. [Encl 72, 335]

1202. The BONHOMME RICHARD CO stated that he was unfamiliar with OPNAVINST 3440.18 on the day of fire. [Encl 82]

1203. The SWRMC CO and Executive Director were unfamiliar with OPNAVINST 3440.18 prior to the fire and stated that no ships in San Diego have been training to this instruction. [Encl 321, 325]

1204. Notwithstanding the requirement in OPNAVINST 3440.18 for CNIC to provide training on the contents of the instruction, CNRSW N3, CNRSW FEDFIRE (b) (6) and CNRSW FEDFIRE (b) (6) reported that they did not receive any training on the instruction from CNIC. CNRSW FEDFIRE (b) (6) reported that he was unaware of the existence of the instruction, and to his knowledge CNIC does not provide training on OPNAVINST 3440.18. The NBSD CO, CAPT Mark Nieswiadomy, and FEDFIRE Metro (b) (6) also reported having not received training on OPNAVINST 3440.18. [Encl 188, 314, 348, 363, 952]

1205. The CNIC N30, (b) (6), noted that CNIC N36 provides a Senior Shore Leader course to new installation leaders providing general guidance on how to respond to an incident. When asked whether the training specifically covers OPNAVINST 3440.18 requirements, he stated that he was not aware of all of the specific topics presented at the training and he would have to confirm with N36. [Encl 687]

1206. When asked about CNIC's responsibilities under OPNAVINST 3440.18, the CNIC N30 noted that CNIC is responsible for coordinating assistance to affected Navy regions. However, he noted that regions are able to request external assistance without prior CNIC approval. The CNIC N30 explained that regions could send a request for support to CNIC, who would then assist the region coordinating support. [Encl 687]

1207. The NBSD CO stated that prior to the fire aboard BONHOMME RICHARD, he was unaware of the existence OPNAVINST 3440.18. He stated that since the fire on BONHOMME RICHARD, his command had not conducted any deep dives of the OPNAVINST 3440.18 and he was not exploring any actions to change NBSD's response procedures to a future shipboard fire or to coordinate with SWRMC. He also asserted that he had not been in communication with SWRMC in regard to OPNAVINST 3440.18 requirements since the BONHOMME RICHARD fire. The NBSD CO assessed that OPNAVINST 3440.18 and the 8010 Manual do not account for or align with the National Incident Management System (NIMS) or the requirements of OPNAVINST 3440.17A and incident response command and control. [Encl 314]

1208. In his training to assume his position as the NBSD CO, he received several weeks of training at CNIC specific to EM, including training on the NIMS. [Encl 314]

1209. The NBSD CO noted that NBSD conducts more ATFP drills onboard the installation than damage control drills (including fires). He assessed that training is more focused on ATFP because force protection presents a higher threat than shipboard fires and noted that his assessment is reinforced by the focus on Anti-Terrorism Force Protection (ATFP) concerns from USFF, CNIC, and Commander, U.S. THIRD Fleet (C3F). [Encl 314]

1210. The NBSD CO stated that OPNAVINST 3440.18 does not correlate with all NIMS terms, and he thought the installation's and region's roles in coordinating with the local community had not been accounted for in the instruction. [Encl 314]

1211. The NBSD CO stated that he did not think NBSD needs to develop separate plans to comply with OPNAVINST 3440.18. He commented that NBSD had plans based on the assumption that firefighting efforts would be effective. He thought that the current response plans should be updated to account for a more catastrophic response, like the BONHOMME RICHARD fire, and updated plans should be informed by lessons learned from the BONHOMME RICHARD fire. The NBSD CO also mentioned that updated response plans should be consistent across all installations. [Encl 314]

1212. RDML Bolivar, CNRSW, referred to the Incident Command System (ICS) under the National Incident Management System (NIMS) as the primary command and control model during casualty events. She noted that there is room for improvement in terms of OPNAVINST 3440.18 and stated that a single point of reference for casualty response is an "immediate necessity." [Encl 471]

1213. While OPNAVINST 3440.18 does not provide specific guidance regarding execution of 8010 Manual requirements, according to (b) (6), OPNAV, Director Shore Readiness Division (N46), the 8010 Manual was included as a reference to OPNAVINST 3440.18, making the 8010 Manual more broadly applicable throughout the shore commands. She also confirmed that they had intended 8010 Manual drills to satisfy the drill requirements outlined in OPNAVINST 3440.18. [Encl 789]

Section XII: Post-BONHOMME RICHARD Fire Corrective Actions

Since the 12 July 2020 fire occurred aboard USS BONHOMME RICHARD (LHD-6), multiple organizations across the Navy have conducted internal reviews, assessments, and analysis to identify areas for improvement and execute immediate changes to limit risk of a future incident. In the seven months since the fire, some of these organizations have released guidance, set new requirements, or provided additional resources to correct identified deficiencies or enhance current performance.

1214. On 16 July 2020, the Director for Submarine Safety signed a report titled "Formal Review and Assessment of USS MIAMI (SSN 755) Fire Corrective Action Effectiveness." The report was directed by a joint letter from Commander, Submarine Force Atlantic (COMSUBLANT)/ Commander, Submarine Force U.S. Pacific Fleet (COMSUBPAC) on 15 May 2020. A 19-member team composed of senior staff from the Atlantic and Pacific Submarine force, as well as representatives from Commander, Naval Sea Systems Command (NAVSEA); Commander, Naval Installation Command (CNIC); the Naval Safety Center; Commander, Naval Surface Forces (CNSF); and Strategic Systems program assembled to complete this review. Though this report was signed after the BONHOMME RICHARD fire, the underlying review was completed before the fire. The report concludes significant actions were completed and submarine fire prevention and response margin to safety has considerably improved since the USS MIAMI (SSN-755) fire. The report cites six key areas that should be addressed to reduce the possibility of a major submarine fire during maintenance to the lowest practicable level. Those areas include 8010 Manual application; integrated response; "worst case" readiness; Personal Protective Equipment (PPE) and system improvement; fire response "time taxes;" and, the MIAMI fire report. The report's executive summary notes the following:

> a. Application and oversight of "8010 Manual" principles are inconsistent, creating risk not readily apparent to Submarine Force leadership.
>
> b. One private shipyard provided documents estimating compliance with 8010 Manual Chapters 2, 3, 12, and 13 would cost approximately $1.5 million. The other private shipyard provided documents estimating cost for similar compliance at approximately $73 million.
>
> c. Drill compliance during availabilities at facilities other than public shipyards and Trident Refit Facilities is marginal at best.
>
> d. Inspection drills typically do not continue to the point where "extreme measure" (e.g., flooding dry dock basin, filling a compartment with foam, etc.) must be considered. As a result, several commands and organizations are confused about "extreme measure" decision making and authorities.
>
> e. Numerous firefighting PPE recommendations were made in the MIAMI fire report. However, other than accelerating previously planned ship alterations (e.g., Self-Contained Breathing Apparatus (SCBA) bottles increased to 45 minutes, providing Firefighting Ensembles (FFE) with longer zippers, and increasing the length of flash

hoods) little was done to improve post-MIAMI submarine firefighting PPE. Shipboard firefighting PPE and system stagnation appears to be the result of a broken "kill chain," where the nexus of commercial technology, Office of the Chief of Naval Operations (OPNAV) and Type Commander (TYCOM) improvement opportunity awareness, fiscal advocacy, and waterfront feedback does not exist.

f. As discussed in both the MIAMI fire report and the 8010 Manual, Commanding Officers (CO) (or their designated representative) are the Incident Commander (IC) for a major submarine fire. Nevertheless, some fire chiefs expressed concern with a unit CO's experience as an IC directing a unified response.

g. Although significant progress toward fully integrated major fire response has been made, barriers remain. Examples: some Federal Firefighting Departments (FEDFIRE) resist using temporary shipboard firefighting systems due to perceived capability shortfalls and continue to default to their own equipment. This practice risks extinguishing agent application gaps during initial response.

h. Time is not on the side of initial responders if flash-over and major fire are to be prevented. Several "time taxes" which could potentially impede fire response exist.

i. Most federal and civilian fire houses do not maintain a status for the submarines to which they might respond. As a result, the submarine's status must be obtained from the IC or other individual after firefighter arrival at the scene.

j. Most federal and civilian fire houses intend to run their own hoses instead of using the pre-stated NAVSEA temporary firefighting system hoses.

k. The reports opinions and recommendations stated the following:

(1) While the 8010 Manual compliance in public shipyards appears to be excellent and oversight is effective, elsewhere compliance and oversight varies from good to problematic.

(2) Periodically evaluate response to major fires requiring mutual aid and space evacuation.

(3) Require CNIC federal firefighters to formally document 8010 Manual temporary firefighting system design concerns and forward to NAVSEA for resolution.

(4) Develop and mandate joint live fire training between Ship's Force and federal/civilian firefighters. This training could be conducted pre-availability and/or periodically.

(5) Establish a standardized major fire communications hierarchy (e.g., FEDFIRE radios primary, secondary, ship's sound-powered phones tertiary) for all shipyards.

(6) Investigate cost effective options to improve major fire drill realism.

(7) Ship's Force and shipyard fire drill grading criteria should emphasize locating the seat of the fire — perhaps with thermal imagery — as a principal step to immediate response.

(8) Ship's Force and shipyard fire drill grading criteria should emphasize continuously applying extinguishing agent as a principal step to immediate response.

(9) With no command or organization actively working to complete additional MIAMI Fire Review Panel corrective actions, and numerous institutional changes implemented since this incident, the MIAMI fire report has completed its usefulness. Therefore, COMSUBLANT/PAC should consider the MIAMI fire report closed and shift all post-MIAMI improvement efforts to addressing the endorsed recommendations of this report.

[Encl 762, 1124, 1125]

1215. On 26 August 2020, Commander, Naval Air Forces (COMNAVAIRFOR) released a messaged titled "ADVANCE CHANGE NOTICE ONE FOR STANDARD REPAIR PARTY MANUAL" issued as a result of recent fires aboard ships in availabilities where Commander, Naval Air Force Pacific (COMNAVAIRPAC) and Commander, Naval Air Force Atlantic (COMNAVAIRLANT) had conducted a review of Nuclear Aircraft Carrier (CVN) in port Damage Control (DC) readiness. The review found the COMNAVAIRFOR Standard Repair Party Manual lacked specificity on Inport Emergency Team (IET) composition and guidance as well as in port rover guidance. The immediate changes by COMNAVAIRFOR provided more detailed guidance for in port roving watches, and more detailed guidance for the implementation, organization, training, and watchstanding guidance, for the IET and IET members, as well as setting increased minimum manning for the IET. [Encl 1126]

1216. On 18 September 2020, CNSF released a message titled "TYCOM FIRE SAFETY ASSESSMENT PROGRAM," which announced the immediate establishment and implementation of the program. In the aftermath of the BONHOMME RICHARD fire, Commander, Naval Surface Force Pacific Fleet (CNSP) / Commander, Naval Surface Force Atlantic (CNSL) conducted a review of shipboard fire safety policies and processes, which found gaps in force awareness and compliance with fire safety requirements. The resulting establishment of the fire safety assessment program was to drive compliance with existing guidance and improve understanding of the risks associated with fire aboard surface ships, especially while in port or in an availability. [Encl 1127, 1128]

1217. The safety assessment program elements include periodic, random, no-notice inspections of ships, compliance with and understanding of fire prevention and response requirements. Focused primarily on the requirements delineated in the 8010 Manual, the inspection utilizes a checklist derived from the 8010 Manual with an inspection team comprised of a minimum of one TYCOM DC and one TYCOM safety subject matter expert. This team is required to assess a minimum of one surface ship each week. For ships assessed as ineffective, remediation plans must be provided to the respective TYCOM N43, with weekly updates until all discrepancies are

cleared. The fire safety assessment program is also intended to provide trends and lessons learned to the force. Specific areas of interest and assessment include:

a. Housekeeping conditions throughout the ship to include proper storage/stowage as well as assessing Duty Fire Marshals.

b. Conducting safety spot-check of two hot work sites to ensure authorization, proper site set up/safety and fire watch is on-station and qualified/prepared.

c. Assessment of ships access and egress routes to ensure they are properly marked and free from obstructions.

d. Assessment of knowledge and functionality of fire zone boundaries to include temporary service quick-disconnect fittings.

e. Evaluation of ship's fire reporting communication systems including installed and temporary alarm systems, general announcing systems, and intra/interoperable radio communications capability. Additional assessment of the ship's Quarterdeck set up to ensure they have the ships' fire protection plan, DC plates and watchbills populated with qualified, competent watchstanders.

f. Performed an evaluation of the ship's firemain system (installed or temporary) to include equipment power source and availability of backup power.

g. A determination of each ship's current fire suppression capability to include status of Aqueous Film Forming Foam (AFFF), High Pressure (HP) water mist, halon/Heptafluoropropane (HFP), magazine saltwater sprinkling, berthing seawater sprinklers, and manually operated systems.

h. A current status of the ship's fuel, flammable liquids, and any accelerants in temporary storage.

i. An assessment of IET and Flying Squad/At Sea Fire Party watchbills.

j. An evaluation of the ship's compliance with the 8010 Manual to include a determination of Fire Marshal level of knowledge, Fire Safety Watch (FSW) training, 8010 Manual Chapter 12 drill completion and the daily safety inspection process.

[Encl 1127, 1128, 1129]

1218. On 21 September 2020, the Damage Control Board of Directors (DCBOD) met with participants from Commander, U.S. Fleet Forces, Commander, Pacific Fleet (PACFLT), Commander Naval Air Forces (CNAF), CNSF, Commander, Submarine Forces (CSF), CNIC, NAVSEA, OPNAV, and Board of Inspection and Survey. The agenda included discussions on 8010 Manual audits, NAVSEA post-BONHOMME RICHARD tabletop, firefighting command and control, MIAMI corrective action review summary, USS FITZGERALD (DDG-62)/ USS JOHN C MCCAIN (DDG-56) actions, USS OSCAR AUSTIN (DDG-79) follow-up, and DC

battle lanterns. The minutes from this meeting reflect multiple action items assigned related to DC, firefighting training, fire safety, fire reporting, and 8010 Manual compliance. [Encl 1061, 1062]

1219. On 23 September 2020, the COMNAVSURFPACINST/COMNAVSURFLANTINST 3504.1 was released. The purpose of the instruction was to provide guidance, policy, and a structured process for maintaining minimum standards for safely getting or remaining underway and conducting an availability. Previous versions of the CNSP/CNSL Redline instruction did not include redlines for availabilities. [Encl 1127, 1130]

1220. On 2 October 2020, CNSF released a message titled "8010 COMPLIANCE AND REPORTING GUIDANCE," which announced new requirements for complying with the 8010 Manual, and directed ships to do the following: deliver a ready to enter maintenance phase brief prior to entering the maintenance phase; read the 8010 Manual in its entirety and comply with all requirements; report completion of 8010 Manual Chapter 12 fire drills, lessons learned, and corrective actions via naval message to TYCOM within 24 hours of completion; report any 8010 Manual compliance concerns, if any, in availability weekly report to TYCOMs; and, create an availability fire response binder containing various documents to include the 8010 Manual; a copy of signed Memorandum of Agreement (MOA) between the Regional Maintenance Center (RMC) and ship; the RMC Fire Response Plan (FRP), to include a comprehensive list of shipyard, local fire (if in a private shipyard), and FEDFIRE emergency contact phone numbers. [Encl 1127, 1131]

1221. On 22 October 2020, PACFLT released a message titled "ASSIGNMENT OF RESPONSIBILITY FOR BONHOMME RICHARD FIRE FOLLOW UP ACTIONS," directing 36 immediate actions based on lessons learned since the BONHOMME RICHARD fire to reduce the likelihood of future shipboard fires. The action items and due dates were assigned to NAVSEA, TYCOMs, Naval Education and Training Command (NETC), CNIC, and Fleet Commanders. The message included several action items from the 21 September 2020 DCBOD meeting minutes. [Encl 1132]

1222. On 23 October 2020, NAVSEA released a message titled "NAVSEA DIRECTED FIRE PREVENTION REQUIREMENTS," which directed all Naval Supervising Authorities (NSA) as well as Commander, Navy Regional Maintenance Center (CNRMC), NAVSEA 21, and NAVSEA 04 to take immediate proactive actions to improve the fire safety posture across both public and private ship maintenance and the construction community. The message directed 23 corrective action areas to address identified weaknesses discovered during a NAVSEA engineering assessment of fire protection systems, DC, and firefighting doctrine. [Encl 1133]

1223. On 27 October 2020, CNSF' s first assessment report of the newly established Fire Safety Assessment Program noted common findings from 17 no-notice ship assessments:

a. Fire Marshals' level of knowledge did not meet 8010 Manual requirements.

b. Fire Marshals lacked qualification and training documentation.

c. Fire Marshals were not conducting an appropriate safety walkthroughs.

d. Fire Marshals did not have a radio or a method of being contacted other than 1 Main Circuit (MC).

e. IET did not meet minimum requirements for team members.

f. Not all IET team members were qualified in Relational Administrative Data Management system (R-ADM).

g. Team members assigned to IET were unaware they were on the watchbill, and were unfamiliar with their assigned positions.

h. IET members were assigned to two incompatible roles at the same time (e.g., DC Phone Talker and Duty Electrician).

i. IET training was being conducted but did not address actions to be taken in the event of a major fire, such as quick-disconnects, loss of shore power, Fire Marshals transition from On-Scene Leader, loss of 1MC or DC Central, (the role of the Locker Leader, use of installed fire systems (beyond the actions of the first hose team), the actions of the Quarterdeck team (including what to brief the fire department upon arrival).

j. Ship Quarterdecks and/or DC Central did not have a working phone line to call out and were relying on cell phones and radio relay between two separate radio systems for both internal and external communications.

k. Quarterdecks did not have the current watchbill or fire protection plan.

l. FRP did not address loss of shore power.

m. Primary communications for Damage Control Repair Stations (DCRS) (ex. Integrated Voice Communication System) were not functional; however, they were able to establish secondary communications.

n. DCRS radios were on-station but some lockers did not have enough working radios (broken, not charged, no spare batteries). DCRSs were locked, and there were significant delays in locating the keys.

o. Ship’s duty section personnel were unfamiliar with quick-disconnects (how to operate them, how to identify them), and had not had recent training.

p. Several machinery spaces had both the main access and escape trunks entrances obstructed with temporary services running through.

q. Multiple vertical boundaries were fully fouled with services, and there was no plan to address setting or mitigating these as part of the fire response.

r. Low level of knowledge at many levels on the status, availability, or utility of installed systems that could be used in a major fire response (AFFF, halon, sprinklers).

[Encl 113, 1127]

1224. On 3 November 2020, CNSF released a message titled "BONHOMME RICHARD FIRE FOLLOW UP ACTIONS TRACKING AND REPORTING," which referenced the PACFLT message of 22 October 2020 and directed Immediate Superior In Command (ISIC) and ships to conduct and report completion of several items related to safety, DC, and firefighting readiness. [Encl 1127, 1134]

1225. On 5 November 2020, NAVSEA released a message listing numerous fire prevention requirements.

a. On 6 November 2020, CNSF released a message titled "ADVANCE CHANGE NOTICE FOR REDLINES INSTRUCTION," which issued an updated change to the 23 September 2020 Redline instruction. These changes were effective immediately to the minimum equipment requirements with no pre-approved mitigations. The update also required ships unable to meet the updated requirements to convene the Fire Safety Council (FSC) to develop a mitigation plan and submit to TYCOM for adjudication. The update specifically required ships to: maintain a functional general announcing system; conduct a daily short count test of the general announcing system in accordance with NAVSEA directed fire prevention requirements; maintain a functional installed DC communications system or an alternate DC communication system at all times; maintain an inter-operable radio communications plan that is validated and tested with shore firefighting entities in accordance with NAVSEA directed fire prevention requirements; and, maintain a fully functional installed or temporary fire detection system in accordance with NAVSEA directed fire prevention requirements.

[Encl 1135]

1226. On 23 November 2020, the second CNSF Fire Safety Assessments report showed substantial improvements in the DC and firefighting readiness since the initial assessments. In total, 26 ships received no-notice assessments since the start of the program. The report noted the program expansion to all surface ship homeports and maintenance sites and also listed areas for further improvement and development as well as actions in progress. [Encl 112]

Chapter 3 – Opinions

The typical starting point for a command investigation is to evaluate the causal events that led to the incident. Conducting this investigation in light of the broad mandate of the convening order required the team to explore and understand the programs and policies in place prior to the USS BONHOMME RICHARD (LHD-6) fire in order to understand and evaluate the performance and execution by all required entities.

Tracing the causal nexus to this fire and the loss of BONHOMME RICHARD starts at the unit level and expands to the oversight, programmatic, policy and resourcing considerations that, at a minimum, contributed to this incident. This section provides opinions and analysis across this entire spectrum. Overall, there were four focus areas that drove the final outcome:

- Material Condition. Throughout the maintenance period, the material condition of the ship was significantly degraded, to include heat detection capability, communications equipment, shipboard firefighting systems, miscellaneous gear clutter, and combustible material accumulation. To illustrate the extent of degradation, on the morning of the fire, 87% of the ship's fire stations remained in inactive equipment maintenance status.

- Training and Readiness. The training and readiness of Ship's Force was marked by a pattern of failed drills, minimal crew participation, an absence of basic knowledge on firefighting in an industrial environment, and unfamiliarity on how to integrate supporting civilian firefighters. To illustrate this point, the crew had failed to meet the time standard for applying firefighting agent on the seat of the fire on 14 consecutive occasions leading up to 12 July 2020.

- Shore Establishment Support. The integration and support expected by the shore establishment did not adhere to required standards. Southwest Regional Maintenance Center (SWRMC) did not meet their requirements associated with fire safety and, in doing so, failed to communicate risk to leadership while facilitating unmitigated deviations from technical directives. Naval Base San Diego (NBSD) failed to ensure its civilian firefighters were familiar with Navy vessels on the installation, verify they were trained to respond to a shipboard fire, or effectively practice how to support Ship's Force and simultaneously integrate responding mutual aid assets.

- Oversight. Ineffective oversight by the cognizant Commanders across various organizations permitted their subordinates to take unmitigated risk in fire preparedness. A significant source of this problem was an absence of codification of the roles and responsibilities expected by each organization in their oversight execution.

Common to all four focus areas was a lack of familiarity with key policies and requirements along with procedural non-compliance at all levels of command from the unit level to programmatic, policy, and resourcing decisions.

Section I: BONHOMME RICHARD Fire and Execution of Casualty Response by Ship's Force and Other First Responders

A. Impact of Ship's Condition on Spread of the Fire

1. Although the identified cause of the fire was arson, the condition of the ship on 12 July 2020 created an ideal environment for the fire to develop and spread. The mass storage of materials in tri-wall boxes, sometimes stacked two high, as well as fueled vehicles in the Lower Vehicle Stowage Area (Lower V) significantly contributed to the fire's intensity. Forensic analysis by the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) determined the fire started in Lower V and spread due to the significant amount of combustible material stored in that compartment. [2, 3, 257, 261-281, 439-449]

2. The fire in Lower V was initially a class "A" fire that primarily burned general combustible material located in tri-wall containers. As the fire spread throughout the ship, it remained class "A," though elements of class "B" fires existed, evidenced by the dense black smoke typical of these fires when fueled vehicles and oil stored aboard the ship caught fire. The presence of an electrical ground resulted in the erroneous report by some watchstanders that this was the cause of the fire. This electrical ground was more likely caused by the fire as it melted electrical cable insulation of live wires. There is insufficient evidence that class "D" combustion ever contributed to the magnitude or spread of the fire. [2, 3, 8-19, 22-24, 28, 44, 48, 80]

3. Regardless of ignition source, a ship's state of readiness must always be maintained such that the crew can rapidly respond and limit the damage from a fire. A ship must be ready to attack a fire at all times, whether to respond to battle damage or a fire while pierside. Although the Navy cannot eliminate the risk of arson, the Navy must anticipate, prepare, and practice for worst-case scenarios. The timing and location of the BONHOMME RICHARD fire, with a space full of combustible materials and on a weekend, when crew response would be minimal, represented a particularly vulnerable point for the ship. Ultimately, poor readiness and material condition rendered any fire response challenging. [1-213, 256, 257, 261-285, 439-449]

4. Significant quantities of scaffolding and combustible material in compartments throughout the ship contributed to the spread of the fire and limited access for first responders. Scaffolding was erected in the Hangar and Upper Vehicle Stowage Area (Upper V) to facilitate ongoing contractor work and Ship's Force had begun moving off the barge and onto the ship. This combination of activity resulted in a significant amount of material flowing through spaces from multiple organizations. The following are the most critical items that enabled the fire spread and simultaneously hindered access for first responders:

a. In Upper V, the storage of pallets of oil drums, gas cylinders, and a large quantity of combustible material.

b. The storage of large amounts of material by General Dynamics National Steel and Shipbuilding Company (NASSCO), including pallets of scaffolding.

c. In medical department spaces, horizontal storage of dozens of oxygen cylinders on a deck (as opposed to purpose-built vertical storage brackets).

d. In Upper V, large amounts of erected scaffolding, which extended to within five feet of the overhead.

e. Materials near the sideport ramp to Upper V from the pier and the ramps to the Hangar and Lower V.

On the morning of 12 July 2020, the material condition of BONHOMME RICHARD was in disorder. The handling and storage of materials coupled with the lack of coordination on the weekend of the fire, combined with a lack of mitigation or consideration for risk accumulation, was the direct cause of the ship's configuration and significantly contributed to the magnitude and severity of the fire. Moreover, the material condition had a direct impact on the ability of first responders to access and navigate the ship. [258, 273-285, 440-449]

5. The majority of the ship's firefighting stations were in an unknown state of operability, which hindered Ship's Force in their initial response efforts to the fire. Despite the ship's fire stations being in a degraded condition just prior to the fire, to include 187 of 216 ship's fire stations (87.5%) being in an Inactive Equipment Maintenance (IEM) status, BONHOMME RICHARD leadership viewed them as fully operational. Although the IEM status did not necessarily indicate the hoses and valves could not function, the IEM status demonstrated that Ship's Force had not maintained, tested or inventoried the stations, which contributed to the crew's varied understanding of the status and availability of systems. Compounding matters, while most of the ship's firefighting stations were in a substandard state of readiness, the inoperability of the three closest fire stations to the fire proved to be a critical impediment on the morning of the fire in the following specific ways:

a. Fire Station 4-53-2, located in Lower V, was the closest accessible station to the fire. At the time of the fire, the station was in IEM and the hose was disconnected from the plug. Statements from Ship's Force indicated several Sailors reached this station, but did not attempt to use it.

b. Fire Station 3-68-2, located on the port side of Upper V, was the closest accessible station to the Lower V ramp. This station was in IEM at the time of the fire. Ship's Force attempted to use this station during the fire but no hoses were present.

c. Fire Station 3-69-1, located on the starboard side of Upper V, was the next-closest station to the Lower V ramp. This station was in IEM at the time of the fire. At this station, one hose was unavailable because it was connected to a cofferdam installed outside of the hull, below the waterline. The second hose was cut near the end of the hose, close to the brass fitting. Consequently, Ship's Force was unable to use this station to engage the fire.

[26, 27, 38, 282, 283, 313-329]

6. The Aqueous Film Forming Foam (AFFF) system on BONHOMME RICHARD was partially available on 12 July 2020, but the duty section lacked the requisite knowledge to configure and operate the system. Although the system was only partially available, with a properly trained crew, it could have been employed to slow the fire's spread. [68, 332-367, 378-386, 390-393, 518]

7. Consistent with the poor material condition of the ship, only a portion of the AFFF system, in a significantly degraded status, was available and operational on 12 July 2020. The decision to only bring up AFFF Stations 3 and 4 after the entire AFFF system was placed in IEM in 2018 meant the system only provided some coverage to the ship, which would have included the main engineering spaces and portions of Lower V and Upper V. Coverage was further limited due to the system being in a degraded status, which was directly caused by Ship's Force not properly completing the Q-1 and Q-2 maintenance checks. Certifying the Q-1 and Q-2 checks as complete with no deviations or deficiencies in SKED, despite knowledge to the contrary, represented a fraudulent act by those involved, and directly contributed to the poor material condition of the ship. Moreover, this conduct compromised the AFFF system further by failing to test the status of many of the push-buttons that could have activated AFFF. The sum total of these circumstances left BONHOMME RICHARD with an AFFF system that, while available, was of an unknown operational status at many of the actuating locations. [45, 68, 350-370, 518]

8. If the required Q-1 and Q-2 checks for AFFF Stations 3 and 4 had been properly completed as documented in SKED, all areas of the ship served by these locations would have had coverage and all push-buttons associated with those portions of the system would have been operational on 12 July 2020. Because the maintenance was not properly performed, various push-buttons were left in an inoperable or unknown state, to include those in Damage Control (DC) Central and the conflagration stations in Lower V. Due to the significant damage caused by the fire, coupled with the falsified maintenance work by Ship's Force, it is difficult to determine the precise status and availability of AFFF in relationship to the areas closest to the fire. [45, 68, 350-370]

9. Based on the configuration of the system in its partially degraded status on 12 July 2020, AFFF still could have been employed and provided coverage in the following manner:

a. The AFFF sprinklers in Lower V, whether activated via remote push-button or manually, could have distributed AFFF to cover the entire port side of Lower V from Frames 49 to 91. While the fire began on the starboard side of Lower V, AFFF deployment on the port side may have significantly slowed the progress of the fire.

b. The AFFF sprinklers in Upper V, whether activated via remote push-button or manually, were available to cover Frames 66 to 92. Of note, this area is not directly over Lower V and there was scaffolding in Upper V that would have limited the effectiveness of these sprinklers. However, if activated, it could have impeded the progress of the fire and contributed to the establishment of an effective boundary.

The Naval Sea Systems Command (NAVSEA) Failure Review Board (FRB) similarly concluded that if AFFF had been employed, it likely would have had a "significant effect on fighting this fire and reducing the damage." If the system had been fully operational by the day of the fire, it could have distributed seawater or a combination of AFFF and seawater to a larger portion of the ship including Lower V, Upper V, the Hangar deck and the ramps connecting them.

[45, 68, 350-370]

10. DC Central was in a degraded state of readiness and prevented the Engineering Duty Officer (EDO) from establishing a centralized response in the early stages of the fire. The 1 Main Circuit (MC) from DC Central does not appear to have functioned throughout the ship, which caused significant delays in calling away the fire, as well as delays in communications during the initial response. Additionally, the AFFF push-buttons in DC Central did not function. While some members of the crew were aware the push-buttons for AFFF in DC Central were non-functional, this information was not widely known and the crew was confused regarding on the available capabilities. Although most of Ship's Force fire responders and DC Central watchstanders did not understand the degraded state of AFFF, the state of AFFF is nonetheless illustrative of a substandard general fire response readiness posture on BONHOMME RICHARD. Ultimately, no crew member attempted to activate AFFF from DC Central or indicated to the investigation team that they considered such an action. [45, 68, 350-370]

11. Ship's Force relied on communication by phone, rather than radios and other installed systems, because critical communication systems were degraded or inoperable (i.e., Hierarchical Yet Dynamically Reprogrammable Architecture (HYDRA) or 1MC) and the DC radios were unavailable. The degraded capability of this critical equipment severely limited communications and hindered command and control. Despite Ship's Force remedial measures of communicating via personal cell phones or point-to-point devices such as J-dial and batt phones, the BONHOMME RICHARD CO, CAPT Gregory Thoroman, lacked awareness of these degradations and poor communication practices. [405-415]

12. The number and placement of BONHOMME RICHARD's brows constrained firefighting efforts. The sideport ramp and the brow onto the Aircraft Elevator (ACE) were the only two brows on 12 July 2020, which limited available egress and access points during the fire. In turn, this impeded the ability of first responders to execute firefighting efforts by limiting courses of action to attack the fire. As smoke filled the forward portion of the Hangar, it threatened access to the brow on the port ACE, which was the last point of egress for the crew and first responders staging in the Hangar. Potential loss of this access point was the reason given by the Command Duty Officer (CDO), (b) (6) , and the CO for evacuating the ship. A stern brow would have enabled firefighting efforts aboard the ship to continue from the Hangar and Well Deck for a greater period of time without compromising egress. The lack of a third brow became even more significant once the entire ship was evacuated and personnel were forced to resume firefighting efforts from the pier, as limited options were available to reenter the ship. This in

turn drove the need to erect a third access point from the stern of the ship. [65, 173-175, 432-437, 465, 475, 768, 971]

13. The ship had a limited number of Self-Contained Breathing Apparatus (SCBA) bottles and insufficient capacity to recharge them. If the crew had remained on the ship to continue firefighting efforts, there would have been a need for additional SCBA bottles, which would have been hampered by the ship's lack of an effective organic refilling capability. [70, 416-423]

14. The combination of an industrial availability, the significantly limited condition of critical ship's systems, and poor organization of the duty section placed the ship in an extremely vulnerable position. At the time of the fire, the ship was in a maintenance availability with significant ongoing contractor work, it was berthed at a pier not designated or equipped to support this level of maintenance, and the crew had begun to move back aboard. [248-255, 972-982]

B. Ship's Force Damage Control Efforts

15. At least 10 critical minutes passed from the time the fire was reported to the Quarterdeck before bells were rung, alerting the crew. The delay of Ship's Force in properly calling away the casualty after personnel smelled and observed smoke was directly causal to the crew's failure to apply agent to the seat of the fire, as well as the overall inadequate initial response. Neither BONHOMME RICHARD's Officer of the Deck (OOD), (b) (6) , nor DC Central watchstanders promptly or properly called away the fire, which delayed Sailors from mustering in the Hangar, dressing out in gear, and assembling hose teams to respond to the casualty. Not only did DC Central fail to recognize that the 1MC announcement from DC Central had not been broadcast throughout the entire ship, the 1MC announcement by the OOD was only made after the OOD had twice contacted DC Central, rather than immediately calling away the casualty. Even then, the OOD's 1MC announcement was not clearly heard and understood throughout the ship. The 1MC announcement did not provide Ship's Force accurate information regarding smoke color, location of the seat of the fire, or direct fire boundaries be set. [4-46]

16. The absence of an effective duty section organization contributed to the lack of speed and coordinated effort in responding to the fire. There was no effective Inport Emergency Team (IET) organization available on the morning of the fire, as members were missing, including the IET leader, which was exacerbated by the lack of an effective muster. Based on existing duty section practices, at no time on 12 July 2020 was there an identified IET member fulfilling his or her assigned roles and responsibilities. [4-46, 540-582, 585]

17. Duty section members outside of the IET were not prepared to be part of the response. Ship's Force expectation that not all Sailors were obligated to engage in firefighting actions delayed the initial response, including action to apply agent to the seat of the fire. Additionally, a significant number of Sailors reporting to the Hangar were not prepared to join hose teams because they thought Navy Working Uniforms (NWU) could not be worn under Firefighting

Ensembles (FFE). This lack of knowledge and preparation affected overall readiness and response, which contributed to the fire's spread and inability to contain it. [4-46, 540-582]

18. Ship's Force initial firefighting effort lacked a coherent command and control structure. The failure of the CDO and Engineering Duty Officer (EDO), (b) (6) , to establish clear command and control at the start of the casualty hampered the duty section's ability to organize efforts, deploy hose teams, and obtain reports from teams returning to the Hangar, which is directly attributable to the manner in which the BONHOMME RICHARD trained to respond to casualties. The scene in the Hangar was chaotic and many witnesses could not identify anyone in charge. [4-46, 478-539]

19. By the time BONHOMME RICHARD Sailors formed hose teams, descended to Upper V, and ineffectively sought agent to engage in fire attack, the fire met the 8010 Manual's definition of "major fire," as it continued to burn out of control. Of note, Southwest Regional Maintenance Center (SWRMC) did not make a "major fire" determination until 1015, approximately 75 minutes later. [25, 35-38, 40, 114]

20. Repeated attempts to access Lower V without sufficient Personal Protective Equipment (PPE) and firefighting agent hindered response efforts, as Sailors were unable to advance and locate the seat of the fire before retreating due to heat and smoke. Ship's Force failed to adhere to basic firefighting principles, evidenced by Sailors' descent down the Lower V ramp without adequate dress or extinguishing agent. This failure is directly attributable to the manner in which BONHOMME RICHARD trained. Furthermore, Sailors' failure to utilize the AFFF hose reel located in Upper V by the port sideport door, even after the port and starboard fire stations were identified as non-operational, also indicated a failure to follow basic firefighting principles. [4-46]

21. Had a team been properly dressed in FFEs and deployed with a firefighting agent, Lower V would have been accessible for Ship's Force to conduct firefighting. Statements by the Duty Fire Marshal, (b) (6) , and (b) (6) indicate they were able to successfully maneuver into Lower V without FFEs more than 20 minutes after smoke was first detected by Ship's Force personnel. Both individuals stated they advanced to a point in Lower V where they could have accessed Fire Station 4-53-2 before turning back. Both individuals also stated they were able to observe the glow of a fire, which indicates properly-dressed hose teams could have accessed the space and applied agent in the same time period. Furthering this same point, San Diego Fire Department (SDFD) accessed Lower V in FFEs more than an hour and 45 minutes after Ship's Force detected smoke coming from Lower V. [4-46, 478-539, 86]

22. Ship's Force failure to apply water to the deck in Upper V allowed radiant heat transfer to ignite materials across Upper V, enabling the fire to spread. No member of Ship's Force used hoses or directed civilian firefighters to cool Upper V or other adjacent spaces to prevent radiant fires in the critical first three hours of the fire. [4-98]

23. Ship's Force did not make any concerted attempt to set boundaries, despite realizing early in the response that Lower V was filled with significant smoke and intense heat. Ship's Force should have attempted to set fire boundaries, but Sailors had neither sufficient training nor knowledge to work quick-disconnects to close hatches and watertight doors. Temporary services impeded fire zone hatches, and the crew was not adequately trained to remove them. Neither the CDO, EDO, nor any other duty section leaders ever gave an order to establish boundaries during the fire, and they never sent organized teams from the Damage Control Repair Stations (DCRS) to take this action. This failure contributed to the crew's inability to contain the fire and the extensive damage and equipment loss throughout the ship. [40, 472, 1040, 1049-1054]

24. Movement of DCRSs added to confusion during the firefighting efforts, which further contributed to the crew's inability to contain the fire. The duty section was originally directed to stage from DCRS 5, but as smoke accumulated in the area, they were moved to DCRS 2M. However, DCRS 2M was also within the smoke-affected area, leading to another move to DCRS 3. As there was no power in DCRS 3, the locker personnel made a final move to DCRS 1H. This constant movement prevented locker leadership from maintaining communications and created confusion that delayed the firefighting response. [28, 31, 428-431]

25. The information gathered by the ship's investigators on the location of the fire was not properly communicated across the crew and to responding firefighters. A series of limited and uncoordinated investigation teams that focused solely on observing the seat of the fire, rather than taking steps to actively engage in firefighting efforts, contributed to a significant delay in the execution of casualty response. When the Federal Fire Department (FEDFIRE) arrived on-scene, Ship's Force did not confirm Lower V as the location of the fire, despite stated observations of an "orange glow" in the Lower V by several investigators. Intense heat and smoke emanating from Lower V should have signaled that the fire originated in Lower V, especially because conditions in other adjacent compartments would have alerted Ship's Force as to the fire's location. Both the Duty Fire Marshal and (b) (6) observed the glow of the fire early in the response, yet this specific information did not reach the CDO, DC Central, and ultimately the FEDFIRE first responders in a timely and accurate manner. [4-46, 48, 49, 62]

26. Failure of Ship's Force to use available hoses or apply agent allowed the fire to spread. No member of BONHOMME RICHARD's crew and no civilian firefighter used the ship's fire stations throughout the firefighting effort, hindering first responders' efforts to contain the fire. Ship's Force made repeated attempts to access Lower V to confirm the location of the fire without proper FFE or agent to extinguish the fire. Subsequent hose teams were dispatched from the Hangar without hoses and were unable to locate a fire hose or employ an AFFF hose reel. These efforts further highlight the failure of BONHOMME RICHARD to follow basic firefighting principles. [4-46, 48, 62, 313-329]

27. The fire stations positioned to make the greatest impact in the early firefighting response were not operational on 12 July 2020. A team led by (b) (6) attempted to use Fire Station 3-68-2 on the port side of Upper V, but there were no hoses at that station. The team

then attempted to use Fire Station 3-69-1 on the starboard side of Upper V. One hose could not be used because it was connected to a cofferdam (over the side of the ship) and the second hose was cut near where the brass fitting should have been located. Of note, both stations were in IEM at the time of the fire. The unavailability of functional hoses at Fire Stations 3-68-2 and 3-69-1 caused the hose team to return to the Hangar without applying agent to the fire. Fire Station 4-53-2, located in Lower V, was the closest accessible station to the fire. Although multiple members of the crew stated that they reached its approximate location in Lower V, no crew member attempted to use it. Of note, the hoses at this station were not connected to the fire plug, and this station was in IEM on 12 July 2020. No attempts were made to deploy hoses from other parts of the ship to be utilized at these fire stations. [26, 27, 38, 282, 283, 313-329]

28. The failure of Ship's Force to use Emergency Escape Breathing Devices (EEBD) when they evacuated various compartments created unnecessary risk to life and safety. The crew was not adequately trained on the use of EEBDs during emergency egress, and Ship's Force failure to use readily available EEBDs when evacuating through smoke-filled berthing and engineering spaces resulted in avoidable cases of smoke inhalation. [66, 67, 535, 1056, 1057]

29. The decisions to evacuate Ship's Force and secure power eliminated the ability to use any of the ship's installed firefighting systems. The CDO ordered power secured at approximately 0915 based on an erroneous belief that an electrical ground had caused the fire. Although it was not possible to determine whether power was secured as a result of this order, the breakers were opened at 0944 and secured power to the aft section of the ship taking the ship's only operating fire pumps off-line. Without these pumps, both ship's firemain and AFFF system were no longer functioning. At about the same time, at 0915, the CDO ordered all personnel not wearing SCBAs to evacuate due to smoke cutting off the last point of egress for the Hangar, the port ACE brow. The CO provided his concurrence via cell phone prior to this order being given. The rest of the crew, even those wearing SCBAs, evacuated over the next 15 minutes, and FEDFIRE shifted their efforts to supporting SDFD from the pier. The evacuation left no uniform members aboard to use the ship's firefighting systems or to lead and integrate firefighting efforts with FEDFIRE or SDFD. [18, 23, 24, 44, 48, 58, 59, 65, 72-81, 84 - 87, 152]

30. The need to evacuate BONHOMME RICHARD could have been avoided or delayed if smoke boundaries had been set; if Ship's Force had an adequate number of SCBAs with sufficient recharging capability; and if a third brow had been available at the stern of the ship. [40, 65, 70, 173-175, 416-423, 432-437, 465, 472, 475, 768, 971, 1040, 1049-1054]

31. Ship's Force did not consider employing the AFFF system in a timely manner, which contributed to the spread and inability to control the fire. Even in its degraded status, if AFFF had been activated in Lower V, it would have provided agent in the vicinity of the seat of the fire, limiting the intensity and rate of its spread. If AFFF had been activated in Upper V, it may have slowed the fire's progress to the aft part of Upper V. Ship's Force should have attempted to activate AFFF; however, on 12 July 2020, duty section personnel had differing understandings of the AFFF system, which contributed to their lack of consideration for this option. There was

almost no discussion about using the system until more than two hours after the fire started. AFFF on the day of the fire could have most easily and effectively been employed had the push-button in Upper V been utilized at any time prior to the 1050 explosion. While it was accessible until at least 1000 that day, the button was never pushed and no member of the crew interviewed considered this action or had specific knowledge as to the location of the button or its function. [4-46, 68, 332-393, 518]

32. On the day of the fire, an AFFF remote push-button, located in Upper V on the starboard side of the Lower V ramp, could have been pushed to deploy agent to the port side of Lower V. Due to the improperly-completed AFFF maintenance checks in April 2020, the exact status of this push-button cannot be determined. However, none of the BONHOMME RICHARD Sailors interviewed considered attempting to use this push-button or indicated an awareness of its location. [45, 68, 332-393, 518]

33. Following the evacuation, a plan was developed by the Repair Division Leading Petty Officer (LPO), (b) (6), to reenter the ship to try to manually align the system to deploy AFFF to Upper V and Lower V. However, this plan revolved around the manual alignment of valves within the AFFF system and does not seem to have considered the use of the remote-push-buttons in Upper V. Push-buttons on the port side and near the centerline of Upper V could have activated the AFFF sprinklers in the aft section of Upper V and port side of Lower V, respectively. Further, this plan did not account for the loss of power to the ship's fire pumps at 0944, or the complete loss of ship's power at 1025. [45, 95, 96, 332-393]

C. Integrated Response Efforts by Ship's Force, SDFD, and FEDFIRE

34. BONHOMME RICHARD's crew did not promptly alert FEDFIRE of the incident. FEDFIRE's prompt response to the fire is attributable to a Commander, Navy Region Southwest, (CNRSW) dispatcher who overheard observations of smoke from the Anti-Terrorism Tactical Watch Officer (ATTWO) while monitoring the Harbor Defense Net. As an unmonitored channel broadcast within the Region Dispatch Center (RDC), the Harbor Defense Net provides information to dispatchers, but there is no requirement to monitor that radio channel. As a result of the dispatcher's actions, FEDFIRE was rapidly notified of the fire. [4-48]

35. Ship's Force had no plan or active firefighting effort when FEDFIRE and SDFD arrived. As SDFD and FEDFIRE each attempted to establish their own plans, Ship's Force did not integrate with either organization to provide critical information, such as the location of the fire or the layout of the ship. When FEDFIRE arrived, the CDO did not have readily accessible DC plates to provide to FEDFIRE. Likewise, FEDFIRE did not maintain DC plates or detailed pre-incident, platform-specific plans that would have helped FEDFIRE navigate the ship in an expeditious manner. [47-64, 84-89, 92, 820-833, 1000]

36. Without a firemain system on Pier 2, FEDFIRE connected to a potable water riser on Pier 2, which was inadequate to support firefighting because of limited pressure and volume. The first

arriving FEDFIRE Engine, rather than the second arriving FEDFIRE Engine, could have connected to a fire hydrant to provide firefighting teams greater water pressure than the potable water riser initially employed. Although not determinative, this error further contributed to the inability to contain the fire and represented poor FEDFIRE training and familiarization. [49, 57, 86, 159, 817, 826, 829, 982]

37. Ship's Force should have directed FEDFIRE to enter the ship via the sideport door to save time, energy, air, and resources to efficiently and effectively respond to the casualty. Neither Ship's Force (including the CDO) nor FEDFIRE recognized the benefit of entering BONHOMME RICHARD via the port sideport door, which hindered firefighting efforts because valuable time was lost with the additional distance and hundreds of additional feet of hose required to reach Lower V. Additionally, descending from the Hangar forced FEDFIRE to descend directly into the rising heat and smoke emanating from Lower V. If FEDFIRE entered the sideport door, used installed firemain on the ship, and had been escorted by Ship's Force personnel to the seat of the fire, agent could have been timely applied to the seat of the fire. Neither group had an established plan for effective coordination and integration. SWRMC's Fire Response Plan (FRP), which was required to direct integrated hose team strategies for a major shipboard fire, did not include such strategy, and the FRP was not adequately incorporated into BONHOMME RICHARD or FEDFIRE training. [48-56, 58, 831]

38. The mechanical incompatibility of FEDFIRE and Ship's Force hoses further complicated integration efforts and demonstrated a lack of effective pre-planning and training. [56, 832, 861, 864, 865, 891, 892, 894]

39. Ship's Force effectively ceased any firefighting attempts and efforts once FEDFIRE arrived. A significant number of Sailors wrongly concluded FEDFIRE assumed responsibility and control of firefighting efforts, causing Ship's Force to improperly rely on FEDFIRE to lead firefighting efforts. Although increasing smoke coupled with deteriorating conditions on the ship and a lack of SCBA bottles prompted the CDO to execute the initial evacuation of BONHOMME RICHARD personnel, the presence of FEDFIRE and the incorrect assumption they would take over further enabled this decision. [48-55]

40. FEDFIRE's failure to employ BONHOMME RICHARD's firefighting systems was inconsistent with the intent of 8010 Manual, OPNAVINST 11320.23G, and CNIC N30 HPD requirements for an integrated response and resulted in the loss of valuable time and resources. [49, 50, 825, 829, 833]

41. During the initial three hours of the casualty response, BONHOMME RICHARD, FEDFIRE, and SDFD did not effectively execute an integrated response. Coordination and communication efforts were limited by a lack of realistic integrated training between BONHOMME RICHARD, FEDFIRE, and SDFD. Prior integrated training could have identified and mitigated communication challenges, equipment interoperability, and clarified roles and responsibilities for an integrated response. FEDFIRE's failure to periodically patch

radios with SDFD led to an erroneous belief that SDFD and FEDFIRE radios could not be linked together at the dispatch center to enable direct communication. [4-64, 83-89, 738, 1015]

42. There was no integration between Ship's Force and SDFD and poor integration between FEDFIRE and SDFD. When SDFD arrived on-scene, they initially climbed to the top of the port ACE and attempted to integrate with the ongoing FEDFIRE effort in the Hangar. As SDFD entered the Hangar, a FEDFIRE chief concerned with accountability issues directed SDFD to depart. At approximately the same time, different SDFD members located the fire via the sideport ramp and shifted their efforts to that location without coordinating with Ship's Force or FEDFIRE. At approximately 0930, if the first SDFD attack team had been escorted by a knowledgeable Ship's Force representative, SDFD would have very likely applied agent to the seat of the fire. SDFD specifically asked the Repair Division LPO to escort SDFD prior to their entry, but the Repair Division LPO and other Ship's Force representatives failed to escort SDFD into the ship, despite repeated requests. SDFD's initial entry via the sideport ramp and descent to the bottom of the Lower V ramp were the final opportunity to prevent the unchecked spread of the fire. Although Ship's Force informed SDFD that the fire was located somewhere below the bottom of the ramp to Lower V, SDFD had no knowledge of the layout of the ship at the bottom of the ramp. SDFD also did not know there was a steel deck below the wood pallets laying on the Upper V deck, and SDFD feared that the deck would be compromised by the fire and they could fall through. SDFD's lack of critical information about the layout ship slowed their progress and reflected FEDFIRE and Naval Base San Diego's (NBSD) failure to adequately train with SDFD prior to the fire. [62, 83-88]

43. On-scene integration and coordination between SDFD and FEDFIRE was limited due to radio communication challenges and lack of mutual aid training. On 12 July 2020, on-scene communications between SDFD and FEDFIRE were limited to in-person communications due to lack of interoperable radios. Effective mutual aid training between FEDFIRE and SDFD should have identified and mitigated these communication challenges and clarified roles and responsibilities for an integrated response. While FEDFIRE and SDFD's radio communications could have been "patched" through the RDC, many FEDFIRE personnel were unaware of this capability, as FEDFIRE does not regularly conduct patching tests. FEDFIRE leadership also asserted that patching creates delays and is not a viable option during a major response. Nonetheless, effective mutual aid training between SDFD and FEDFIRE should have tested the patching capabilities and identified and mitigated the communication challenges. [60, 61, 901-922, 1015]

44. The lack of coordination between firefighting organizations and BONHOMME RICHARD's crew delayed putting agent on the fire. The arrival of FEDFIRE essentially stopped the efforts of Ship's Force in the Hangar. With almost no information as to the layout of the ship or the location of the fire, FEDFIRE started a new firefighting effort from the Hangar with water and hoses from the pier. By the time FEDFIRE had laid their hoses all the way to Lower V, SDFD had already entered through the sideport door. SDFD's sideport entry interfered with FEDFIRE's effort from the Hangar, which was then filled with smoke. SDFD initiated its entry via the sideport ramp with almost no information as to the layout of the ship or

the location of the fire. This series of events delayed effective firefighting and allowed the fire to proceed unchecked for almost two hours. SDFD's attack on radiant fires in Upper V at about 0950 (100 minutes after smoke detection), was the first and only time direct agent was deployed on any fire aboard BONHOMME RICHARD prior to the 1050 explosion. Ultimately, this singular attack was not sufficient to prevent the fire from spreading, and the fire continued unabated in Lower V. [48-64, 83-87]

45. Failure to account for two Ship's Force members led to a rescue attempt by SDFD and Ship's Force personnel. Efforts to account for all Sailors on the morning of 12 July 2020 were complicated by a lack of a formal method to account for personnel who had recently moved aboard the ship. As a result, BONHOMME RICHARD was unable to conduct a rapid muster. When two BONHOMME RICHARD Sailors could not be accounted for, some attention was diverted from in-hull operations to a potential rescue operation. Following the evacuation of the ship, there was a focused effort to account for all Sailors in the duty section and for those who had moved aboard. When one Sailor still could not be accounted for, a group of SDFD personnel entered the ship via the port ACE with a BONHOMME RICHARD Sailor to locate the missing Sailor, but were turned back by heavy smoke. The Sailor was later accounted for at a location off the ship. Ultimately, all crew members were accounted for prior to the 1050 explosion. [90, 91, 666]

46. Minutes before the major explosion at 1050, SDFD (b) (6) identified changing conditions in smoke volume, velocity, density, and color, which indicated a pending explosion. SDFD and FEDFIRE both ordered an evacuation of the ship, and the last firefighters exited the ship minutes before the large explosion at 1050. This timely action by civilian firefighting organizations saved lives and prevented serious injuries. Although the investigation did not obtain quality video of the 1050 explosion, the damage done to the interior of the ship confirms witness accounts that the explosion was massive and would have likely killed or severely injured anyone in Upper V at the time of the explosion. [94, 97-100]

47. After the 1050 explosion, the fire grew in intensity as it spread throughout the ship, making it difficult to reengage in firefighting operations and limit the spread of the fire. [98, 99, 101, 102, 108]

48. SDFD's departure in the afternoon on 12 July 2020 was aligned with SDFD's departmental risk priorities and should not have been unexpected. FEDFIRE and Ship's Force disappointment over FEDFIRE's departure reflected an insufficient understanding of SDFD departmental priorities and capabilities and a lack of sufficient mutual aid training. [90, 91, 94, 97-100, 141-145, 902-907]

49. Establishing a command post outside of NBSD Headquarters was effective for staging personnel and equipment and coordinating operations with the Incident Command Post (ICP). The command post ensured that hose teams were dressed out and prepared to relieve existing

teams as needed. The command post also facilitated better integration between Ship's Force, FEDFIRE, and other supporting organizations. [146-150]

D. Major Incident Response by Other Supporting Commands

50. The lack of a commonly understood command and control structure, led to a lack of understanding of who was in charge of response efforts, creating a leadership vacuum on 12 July 2020. The command and control structure identified in OPNAVINST 3440.18 for responding to a major non-nuclear shipboard casualty was not used during this incident. BONHOMME RICHARD's CO and the NBSD CO, CAPT Mark Nieswiadomy, had never heard of or trained to OPNAVINST 3440.18 prior to the fire. Of note, OPNAVINST 3440.18 requires coordination between the installation and the Naval Supervising Authority (NSA) commander to provide integrated support to the ship. NBSD and SWRMC were unprepared to integrate their response efforts. As a result, supporting organizations were left to discern roles and responsibilities as the casualty was occurring. Likewise, the command and control structure outlined in the 8010 Manual, which directs use of an "in-hull" ICP and an "off-hull" ICP, was not effectively utilized, leaving supporting entities with a lack of clarity on roles and responsibilities for the firefighting effort. [111-127, 228, 234-241, 715, 1202-1207]

51. The willingness and readiness of numerous Rescue and Assistance (R&A) teams, responding from across the waterfront to support BONHOMME RICHARD firefighting efforts was commendable. Although BONHOMME RICHARD failed to effectively integrate and employ these R&A teams into the initial firefighting effort for the first several hours, the supporting personnel demonstrated rapid action and an eagerness to respond. As the firefight stretched into multiple days, countless Sailors and officers from across the waterfront provided firefighting teams and equipment. [22, 43, 65, 146, 228]

52. In the absence of clear leadership by the NBSD and SWRMC COs to manage the incident response at the installation level, CNSP ordered Expeditionary Strike Group THREE (ESG-3) to manage the overall incident response. Coordination between the Emergency Operations Center (EOC), Emergency Control Center (ECC), and the on-scene Incident Commanders (IC) and external entities improved when ESG-3 assumed a leadership role. The hourly conference calls led by ESG-3 effectively brought together various organizations to share information and efforts, meet reporting requirements, and synchronize resources. Notwithstanding the positive impacts of ESG-3's leadership, ESG-3 did not have specifically delineated responsibilities for the incident response per Navy policy, and the incident command and control did not reflect adequate training or knowledge of the 8010 Manual, OPNAVINST 3440.18, or OPNAVINST 3440.17A. [112-127]

53. Incident coordination was degraded because the EOC neither trained nor prepared for an incident of this magnitude. Multiple witnesses described challenges in communications between the EOC and the ICP, as well as challenges internal to the EOC. The NBSD Emergency Management (EM) Plan's Hazard-Specific Appendix for shipboard fires does not contain adequate guidance for responding to a major shipboard casualty. While the Hazard-Specific

Appendix acknowledges the presence of maintenance activity on NBSD and the adoption of new Navy fire safety policies enacted since 2012, the shipboard fire checklist provides no guidance on necessary coordination with SWRMC and makes no reference to the role of the SWRMC ECC. Further, while the checklists reference the 8010 Manual, they contain no further guidance to train and prepare EOC members for carrying out the 8010 Manual requirements. Additionally, the Hazard-Specific Appendix does not reference OPNAVINST 3440.18. These deficiencies contributed to a lack of preparedness for the EOC to effectively respond to major casualty on 12 July 2020. [111-136, 939-945, 947-958]

54. NBSD and SWRMC's failure to coordinate training for a major shipboard fire resulted in unclear lines of responsibility during the incident response. The respective roles of the EOC and SWRMC's ECC were unclear during the early hours of the response because the EOC and the ECC both failed to effectively train for a major shipboard fire. The EOC Director, (b) (6) , reported only limited EOC engagement on 8010 Manual drills. NBSD coordination with SWRMC was more focused on pier safety and environmental concerns. Several EOC members reported confusion over the role of the ECC. The limited bandwidth of command and control on-scene necessitated a single location for reporting information, but the ECC did not immediately integrate with the EOC. [111-136, 242, 714-716, 943-945, 966, 1207]

55. (b) (6) of NAVSEA 00C, on her own initiative, took early action in response to the BONHOMME RICHARD fire that resulted in activation of important assets that were effectively employed later in the firefighting effort. Though she was working on unrelated matters at the time of the fire, she responded with urgency and without higher direction. Her initial efforts enabled the follow-on NAVSEA 00C support, all of which positively contributed to the fire response. Without her early action, delays in procuring these critical assets and assistance may have prolonged the fire at the risk of more personal injuries. [173, 187, 191, 194]

56. NAVSEA failed to effectively use its planned command and control structure to provide and receive information during the event, which complicated incident command efforts on Pier 2. Multiple times during the incident, NAVSEA directly contacted the BONHOMME RICHARD CO, rather than using the EOC or ECC to coordinate these questions. The NAVSEA Ship Incident Response Center (NSIRC) only provided limited support and was hampered by the lack of timely updates. NSIRC's suggestions were often time-delayed, such as proposals to restore firemain late in the evening on 12 July 2020 following multiple explosions which had likely compromised firemain integrity. [118, 131]

57. The decision to evacuate the ship after the list shift on 15 July 2020 was reasonable under the circumstances. Shifting debris and equipment posed a danger to personnel aboard. The failure of NAVSEA technical experts to effectively integrate with the fire responders resulted in concerns about a potential rapid list shift never being communicated to the ICP before the shift. Firefighters aboard at the time of the shift were left unprepared for the movement, which led to a halt to firefighting efforts. [199-208]

58. NASSCO, the Lead Maintenance (LMA) for this availability, took actions consistent with their contract and FRP during the fire on BONHOMME RICHARD. Their actions did not

detract from the fire response. Specifically, a NASSCO contractor aboard reported the fire to the EDO promptly, NASSCO effectively mustered all contractor personnel, and secured power to temporary services. [82, 91, 244, 245, 251]

E. Subsequent Firefighting, Stability, and Dewatering Efforts

59. The complete evacuation and subsequent explosion that occurred on BONHOMME RICHARD at 1050 was a turning point in the fire response and left all organizations operating outside of expected roles and responsibilities. In the hours following the explosion, the lack of any meaningful firefighting efforts allowed unchecked spread of fire throughout the ship. In the afternoon of 12 July 2020, simultaneous with the fire teams reestablishing a foothold in Upper V, the fire reached the superstructure and spread throughout multiple decks. [98-102, 154-164]

60. The tactic employed to "surround and drown" the fire as BONHOMME RICHARD's crew and FEDFIRE attempted to regain access to the ship following the initial large explosion was likely the best course available; however, it failed to slow or prevent the unabated spread of the fire. By 2000 on 12 July 2020, no personnel were on the ship; flames were openly venting from the superstructure; and warping of the Flight Deck was leading to concerns over the structural integrity of the Hangar. While not reflected in the statements of those present, the integrated firefighting efforts that gradually developed into the evening of 12 July 2020 were essentially a salvage operation. [154-162, 1041-1044]

61. While Ship's Force did not initially integrate into hose teams with FEDFIRE (with minor exceptions), beginning in the afternoon of 12 July 2020 and continuing throughout the extended response, BONHOMME RICHARD Sailors and FEDFIRE executed a more effective integrated response. Throughout the subsequent response, Sailors were more consistently employed and integrated into FEDFIRE fire teams as efforts transitioned to locating and cooling hot spots and extinguishing remaining fires. [152, 48-55]

62. Execution of the extended integrated response between BONHOMME RICHARD and FEDFIRE continued to reflect a lack of understanding of basic principles for command and control for a major casualty. Establishment of separate FEDFIRE and BONHOMME RICHARD ICPs on opposite sides of the pier impeded information flow to the EOC and inconsistent with the command and control structure outlined in the 8010 Manual and Navy EM policy. [120, 121, 150, 163, 240, 241]

63. Communication challenges between the pier and the EOC were a common problem throughout the extended response, including a false report to Commander, ESG-3, RDML Phillip Sobeck, that the fire was out and an erroneous report to the BONHOMME RICHARD CO that the BONHOMME RICHARD was experiencing a hogging condition. [120, 121, 150, 163-201, 240, 241]

64. After the fire spread throughout the ship, indirect firefighting methods were necessary to regain access to compartments overcome by fire. These indirect methods required hull cuts to be made through various bulkheads and decks in order to make progress in containing the fire. These hull cuts proved effective in advancing the effort to contain the fire but were hampered by failures in equipment. Had these indirect methods been employed earlier in the fire, more points of attack would have been available to responders. [189-191, 195]

65. US Fire Pump positively contributed to the overall firefighting effort, providing resources and techniques not readily available to the Navy, to include higher capacity pumps, drones with thermal imaging capability, and tactics beyond what Ship's Force or FEDFIRE would normally employ. [180, 187, 191, 194]

66. There was no effective tracking of BONHOMME RICHARD's list and trim until NAVSEA 00C assumed responsibility for the ship's stability. Early efforts were poorly overseen and resulted in incorrect information being passed to decision makers, who then spent valuable time pursuing unnecessary stability efforts. Only when NAVSEA 00C developed a centralized ballast plan was an accurate picture of the ship's stability available to ICP. [199-208]

Section II: Fleet, NAVSEA, and CNIC Policy and Oversight for Fire Prevention

There are a host of requirements regarding fire safety levied upon various organizations, and the decisions made at all echelons had impacts on the conditions prior to and during the response to the fire aboard USS BONHOMME RICHARD (LHD-6). The U.S. Navy Regulations are unequivocal in stating a Commanding Officer's (CO) responsibility is absolute, which is fully recognized in this report. The responsibility of the ship's CO does not, however, obviate any other organization of the responsibilities he/she is required to execute. This arrangement of responsibility is especially critical regarding fire safety during an availability where the conditions of a ship are constantly changing.

A. Fleet Oversight and Responsibilities

BONHOMME RICHARD

67. Consistent with Chapter 8 of the U.S. Navy Regulations, the BONHOMME RICHARD CO maintains absolute responsibility for the safety, well-being and efficiency of the ship. The BONHOMME RICHARD CO, CAPT Gregory Thoroman, failed in this responsibility by accepting the ship's substandard material condition and crew readiness to the point where the fire of 12 July 2020 was able to destroy the ship. Moreover, he failed to exercise effective oversight and lacked situational awareness of several substandard practices and conditions. [4-46, 55, 60, 62-80, 95, 96, 244-449, 478-584, 1039-1054]

68. The CO, Executive Officer (XO), (b) (6), and Command Master Chief (CMC), (b) (6), were negligent in providing adequate oversight over duty section composition, development of individual duty sections across the various departments, and the execution of this program. This negligence resulted in formal and informal arrangements where senior enlisted personnel and officers did not stand duty and engaged in unauthorized duty swaps and relaxed practices, all of which culminated in the creation of a duty section on 12 July 2020 that significantly lacked seniority, experience, and training. The timing of the fire early on a Sunday morning immediately after duty section turnover further exacerbated these factors by placing this inadequately composed duty section as the immediate responders during a vulnerable period of time. [4, 540-582, 585]

69. Ship's leadership, Southwest Regional Maintenance Center (SWRMC), PHIBRON-5, and CNSP all should have recognized and addressed BONHOMME RICHARD's documented substandard firefighting performance on multiple shipboard fire drills. Since returning stateside in 2018 and across multiple leadership changes, BONHOMME RICHARD repeatedly failed to put agent on the seat of the fire within the requisite time over the course of many drills. In October 2018, Ship's Force not only failed the fire drill during the Readiness Evaluation Three (READ E-3) event, but they also exceeded the standard time to apply agent to the seat of the fire during their 8010 Manual Chapter 12 A+30 and A+180 fire drills. The inaction by the various

commands providing administrative and operational oversight of the ship despite a well-documented pattern of substandard performance demonstrates the division of responsibility amongst these organizations was ineffective. [478-506]

70. BONHOMME RICHARD leadership was not sufficiently engaged in Damage Control (DC) training. Damage Control Training Team (DCTT) training evolutions rarely included Senior Leadership involvement, with minimal participation by the Damage Control Assistant (DCA), (b) (6), Chief Engineer (CHENG), (b) (6), and XO. When the Assistant Damage Control Assistant (ADCA), (b) (6), voiced concerns regarding the quality of DC drills, neither the CHENG nor the DCA took sufficient action to resolve identified problems. This lack of action by both senior officers constituted an abdication of their responsibilities as DC leaders. [507-534]

71. BONHOMME RICHARD improperly emphasized physical observation of a casualty prior to announcing the casualty over the 1 Main Circuit (MC) along with other practices that did not prepare the crew for an actual event. This flawed training approach contributed to Ship's Force failure on 12 July 2020 to rapidly announce the casualty over the 1MC. The delayed announcement of the casualty, combined with the smoke and heat emanating from Lower Vehicle Stowage Area (Lower V), contributed to a scenario which was beyond the capability for the ship's initial responders. [4-46]

72. BONHOMME RICHARD training and drills lacked sufficient variety and rigor to prepare the crew for a fire of almost any magnitude. On the day of the fire, this lack of training was apparent in Ship's Force inability to rapidly don DC gear, establish effective fire and smoke boundaries, proper electrical isolation, and maintain communications between the scene, locker, and DC Central. [516, 518, 519, 526, 531]

73. Throughout the availability, and with limited exception, Ship's Force did not train to effectively integrate with Federal Fire Department (FEDFIRE) in the event of a casualty. The primary focus of the ship when it came to drills was to prepare for a post-availability environment. This directly contributed to the vast majority of drill packages never referencing or practicing the type of integration required in the 8010 Manual. Because they did not practice integration, Ship's Force lacked muscle memory and the tools and knowledge to effectively amalgamate with FEDFIRE. Although the 8010 Manual Chapter 12 drills cite to the Fire Response Plan (FRP) and may have resulted in some FEDFIRE integration training, the frequency was insufficient given the longevity of the availability. By failing to train for an integrated environment, Ship's Force lost the opportunity to employ this skill when it was most needed. [479-491, 503, 511, 871]

74. BONHOMME RICHARD's failure to consistently require emergency egress and Emergency Escape Breathing Devices (EEBD) training jeopardized the safety of Sailors as they attempted to clear berthings and evacuate on 12 July 2020. During the casualty, at least one

Sailor passed out trying to evacuate the ship, demonstrating the importance of required egress training, practices, and use of EEBDs. [66, 67, 538]

75. Drills did not simulate use of Aqueous Film Forming Foam (AFFF) throughout the entire availability, failing to prepare the crew to activate AFFF in the event of a fire. The Command Duty Officer (CDO), (b) (6), Engineering Duty Officer (EDO), (b) (6), and DC personnel all had a different understanding of the system's status, with few possessing knowledge of how to operate the system. Because there was little common understanding among BONHOMME RICHARD's crew regarding the AFFF system, there was little chance they would have been able to effectively employ it on 12 July 2020. [45, 68, 378, 380-383, 386-393, 518]

76. The AFFF system contained agent and was available for use on the morning of 12 July 2020; however, poor maintenance and watchstanding practices left the system in a significantly degraded readiness state that was not understood by nearly all Ship's Force. Moreover, the required checks to verify the system was online were falsely certified, which further confused Ship's Force on the availability of AFFF. While this opinion aligns with the Naval Sea Systems Command (NAVSEA) Failure Review Board (FRB) that AFFF Stations 3 and 4 were online at the time of the fire, the NAVSEA FRB did not address these maintenance discrepancies. All push-buttons for AFFF Stations 3 and 4 were documented as functional following the completed maintenance checks in April 2020, but only some push-buttons were actually online and able to activate the system to apply agent to portions of Lower V and Upper Vehicle Stowage Area (Upper V). On 12 July 2020, it would have been possible to manually realign the system to initiate space sprinkling to the entire space to contain the fire, had there been knowledgeable operators and an adequately trained crew. However, there was no clear understanding by the duty section regarding which buttons functioned or which portions of the ship had coverage, and the duty section lacked the knowledge to realign the system. The engineering department leadership should have recognized the AFFF system limitations and generated a Temporary Standing Order (TSO), as well as the associated required training for AFFF operation in an abnormal condition. These failures all contributed to the crew's inability to effectively combat the casualty the morning of 12 July 2020. [45, 68, 332-335, 341, 378, 380-383, 386-393, 518]

77. Due to a combination of inadequate maintenance planning, insufficient oversight, and lack of integrity, quarterly AFFF maintenance on Stations 3 and 4 was falsely certified as complete prior to the fire. The BONHOMME RICHARD DC organization felt pressure to restore the system in time for a fuel onload and focused primarily on the system's functionality in the main engine rooms. As a result, numerous push-buttons and system control stations, including those in DC Central, were not operable, but the system was nevertheless accounted for as fully operational in the maintenance accountability system, with known discrepancies unreported up the chain of command beyond the Repair Division Leading Petty Officer (LPO), (b) (6), and Repair Division Leading Chief Petty Officer (LCPO), (b) (6), leading the maintenance. [332, 340, 341, 344-356, 360-371]

78. Active Damage Control Repair Stations (DCRS) were not consistently maintained or trained in, resulting in an unclear status by the duty section and contributing to the ship's poor safety posture. Discrepancies between DC Logs and general crew awareness of active DCRSs confused and inhibited the firefighting effort on the morning of 12 July 2021. The DCRSs that were actively maintained did not meet the requirements of the 8010 Manual but had been approved by the Fire Safety Council (FSC). [31, 424-431]

79. The DCA failed to effectively manage ER04 and ER09. The extensive amount of firefighting equipment remaining in Inactive Equipment Maintenance (IEM) as well as the unacceptable manner AFFF maintenance was conducted were the result of a DC organization left to a junior chief and an under-experienced group of Damage Controlmen. The DCA did not recognize this risk and failed to take meaningful action to mitigate these issues. [294, 296, 298, 300, 307, 308, 313-316, 322-328, 339, 344-356, 359, 365, 378]

80. There was no effective conscious risk decision-making by Ship's Force or the FSC associated with taking a fire hose offline to support a cofferdam. This decision was not documented, and Ship's Force lacked awareness of the configuration, which directly contributed to their inability to put agent on the fire in the first three hours. [38, Appendix E: BONHOMME RICHARD FSC Minutes]

81. The documented case of a cut hose located at Upper V in May 2020 should have heightened the crew's awareness of the need to frequently inspect installed DC equipment. Although this particular instance was corrected, Ship's Force did not routinely walk spaces or take other consistent measures to inspect and maintain firefighting equipment. Moreover, if done correctly, the daily drills conducted by Ship's Force should have helped identify and address failed or missing installed firefighting systems. [313-329, 531]

82. The BONHOMME RICHARD CO, XO, CMC, and Department Heads did not effectively ensure the readiness and material condition of the spaces under their cognizance. Contributing to this, both the Lead Maintenance Activity (LMA) and several of the ship's Department Heads misunderstood BONHOMME RICHARD's absolute responsibility and ownership over the material condition of the ship's spaces, regardless of the maintenance work being conducted. The LMA and BONHOMME RICHARD erroneously thought space ownership was transferred to the LMA for work and back to Ship's Force after completion within a space after formal turnover occurred. BONHOMME RICHARD leadership's lack of ownership and responsibility for the ship and its physical spaces throughout the phases of the availability directly led to the poor material condition in Lower V and Upper V on the morning of 12 July 2020, which hastened the spread of the fire and impeded efforts to attack it. [260-264, 275, 277, 449]

83. The ship's Maintenance Material Management (3M) execution and oversight was deficient and directly contributed to the poor fire safety posture. These deficiencies are the result of the XO's failure to properly discharge his responsibilities for managing and executing the ship's 3M program. [318-320]

84. Engineering leadership did not appreciate the impact of equipment and electrical power redundancy on casualty response. Allowing the ship to remain without a backup source of power, from undocking until the day of the fire, rendered the ship entirely reliant on shore power to combat any casualty. Engineering Logs, reviewed up through CHENG, consistently showed two fire pumps online from a single shore power source, illustrating the entire department had awareness of this risk. Guidance on system alignments that are designed to ensure equipment redundancy should have been established by CHENG to maximize the ability to combat any casualty. [79, 80, 93, 288-312]

85. The degraded readiness status of the ship's DC Central prevented the EDO from establishing a centralized response in the early stages of the fire, which directly contributed to the crew's inability to organize and combat the casualty. This contributed to the crew's challenges operating the 1MC from DC Central to communicate throughout the ship on the morning of the fire. On 12 July 2020, this caused significant delays calling away the fire as well as delays in communications during the initial response. The awareness of these degradations in DC Central, which also included the inability to remotely activate the pushbuttons for AFFF, are illustrative of a substandard general fire response readiness posture on BONHOMME RICHARD. [9, 16, 21, 355, 364, 367, 409]

86. The Deck Department Head and LCPO failed to exercise control over the storage of materials in both Upper V and Lower V. Both individuals stated that NASSCO owned the spaces while acknowledging the ship stored large quantities of material in the space. They were not proactive in monitoring or preventing accumulation of combustible material. [262-264, 268-270, 275-279]

87. BONHOMME RICHARD's crew was accustomed to poor storage practices, which eroded standards and prevented any effective enforcement. While Sailors of all ranks noted the presence of barrels of flammable Hazardous Materials (HAZMAT) stored in Upper V the week prior to the fire, no Sailor took action to ensure proper stowage. While a zone inspection program existed and occurred periodically, it was ineffective in ensuring safe storage of material. [262-264, 266, 268-270, 275-282, 441-444]

88. The CHENG delegated approval authority, without authorization from the CO, of the in port engineering department watchbill to the Engineering Department LCPO, (b) (6) . This delegation resulted in inadequate oversight over the watchbill, as exemplified by the failure to use Relational Administrative Data Management system (R-ADM) for the construction and dissemination of the watchbill. [555, 558, 559, 561, 571-574, 579]

89. The CHENG was ineffective in managing the DC organization on BONHOMME RICHARD. He was disengaged from the day-to-day of DC operations and allowed friction between him and DCA to bleed down to the division level. This resulted in a lack of oversight by the CHENG over DC training, drilling, and maintenance. [81, 294, 296, 298, 300, 307, 308, 313-316, 322-328, 339, 344-356, 359, 365, 378, 442, 444, 477, 507, 523, 524]

90. As a matter of routine practice, engineering department did not communicate the status of ship systems to departmental personnel, duty section personnel, or BONHOMME RICHARD leadership, which contributed to the crew's ignorance of ship systems. [378-386, 390, 391]

91. Ship's Force, NASSCO, and SWRMC failed to question the presence of significant quantities of combustible material in various spaces throughout the ship during required fire safety walkthroughs, illustrating a lack of vigilance. Additionally, this lack of vigilance was demonstrated by the significant number of watchstanders, contractors, and other BONHOMME RICHARD Project Team (PT) personnel that frequently transited and used these spaces without addressing the combustible material. The presence of the below items, without any mitigation or action to address risk accumulation, directly contributed to the magnitude and severity of the fire:

a. In Lower V, the mass storage of materials in tri-wall boxes and fueled vehicles.

b. In Upper V, the storage of pallets of oil drums, gas cylinders, and a large quantity of Ship's Force combustible material.

c. The storage of large amounts of material by NASSCO, including pallets of scaffolding, directly impeded firefighter access to Lower V.

d. In medical spaces, horizontal storage of dozens of oxygen cylinders on a deck (vice in installed brackets) due to ongoing work.

[261, 266-268, 270, 273, 275-277, 439-441, 445, 448]

92. The large quantity of lines and leads fouling accesses throughout the ship would have made setting boundaries difficult given that Ship's Force lacked the requisite training to set boundaries using industrial quick-disconnects. Although SWRMC provided training on quick-disconnects at the start of the availability, both BONHOMME RICHARD and SWRMC failed to recognize that the frequency of crew turnover and length of the availability resulted in large amounts of Ship's Force never receiving this training by the time of the fire. Contributing to this, drills did not adequately train to the ship's configuration during the availability. These failures directly led to the crew not setting boundaries on the morning of 12 July 2020. [40, 483, 484, 516-518, 538, 539]

93. Ship's Force reliance on communication methods other than primary installed systems detracted from the ability to fight the fire in a coordinated manner. Critical DC communication systems were degraded or inoperable (i.e., Hierarchical Yet Dynamically Reprogrammable Architecture (HYDRA) or 1MC), which led Ship's Force to grow accustomed to communicating using personal cell phones or point-to-point communications rather than installed ship systems. The CO lacked awareness of these degradations and poor communication practices, which impeded his ability to address these deficiencies but also illustrate that the CO was disconnected from the routine practices of how Ship's Force communicated. [8, 9, 16, 405-415]

94. BONHOMME RICHARD's IET turnover process failed to ensure that IET members were aware of, and in some circumstances qualified for, the roles they held on 12 July 2020. The ship's duty section turnover process was flawed in assigning multiple members of the IET to other watchstanding positions. Sailors were neither aware of nor qualified for their IET roles on 12 July 2020, which directly contributed to the inadequate and uncoordinated response during the initial three hours of the fire. Allowing the off-going IET to depart on 12 July 2020 before validating the oncoming team had mustered aboard should not have been acceptable. These deficiencies were exacerbated by engineering department's practice of assigning IET personnel to other watch stations. [4, 555-584]

95. BONHOMME RICHARD's watchstander liberty practice for CDO-qualified officers left a junior CDO lacking requisite experience without forceful backup or support as he attempted to handle a major casualty on 12 July 2020, his first duty day as CDO. The BONHOMME RICHARD CO's lack of awareness of this practice demonstrates a failure to effectively oversee the CDO program. Because the presence of the other three qualified CDOs in Duty Section 6 was not required, each of whom had significantly more experience than CDO, this decreased the number of qualified personnel on that morning and precluded a more effective casualty response. [542-561]

96. The record keeping practices by Ship's Force did not conform to expected standards. While many logs and other records were lost to the fire, those that did survive rarely reflected an accurate sight picture of the ship's configuration, especially for DC systems. The poor record keeping practices further contributed to the numerous challenges experienced by Ship's Force during initial firefighting efforts. Moreover, these poor record keeping practices made it difficult throughout the course of this investigation to determine the ship's configuration and available systems on the day of the fire. [286-431]

97. The crew's readiness gradually degraded as BONHOMME RICHARD entered the availability in November 2018. Under the leadership of the previous CO, (b) (6) , this degradation was exacerbated by relaxed practices, to include four-day work weeks, CDO boards held without CO or XO participation, and the significant reduction of zone inspections and elimination of ER09 as a stand-alone work center. [544, 547, 548]

98. The CO, XO, CHENG, and DCA had an insufficient understanding of COMUSFLTFORCOMINST 4790.3 and 8010 Manual requirements, which rendered BONHOMME RICHARD vulnerable given the leaders were ill-equipped to challenge prime contractor employees and SWRMC project team members on decisions related to fire safety. Because of this, BONHOMME RICHARD leadership was incapable of understanding the true impact of altering, securing, or removing installed firefighting systems aboard. [466, 467, 476]

99. BONHOMME RICHARD Sailors who stood duty as Duty Fire Marshal were not familiar with the industrial firefighting updates to NSTM 555. NSTM guidance on industrial firefighting

is neither well understood nor practiced, which contributed to Ship's Force lack of effective firefighting strategy on 12 July 2020. [4-46, 309, 391, 573, 1155]

100. Perceived scheduling pressure associated with the upcoming loss of the berthing barge drove the CO to move Sailors back aboard BONHOMME RICHARD in a non-formalized manner despite the poor habitability condition of the ship. Although the barge was scheduled to support an upcoming Nuclear Aircraft Carrier (CVN) availability, there was flexibility but BONHOMME RICHARD failed to explore an extension or develop other courses of action. As a result, the CO's push to move off the barge led to personnel moving aboard the weekend prior to the fire with a significant number of services unavailable throughout the ship. [250, 253, 404, 655-668]

101. There is no official Navy policy or lower-level guidance detailing requirements for reestablishing habitability of a ship with a safe working environment after a ship has been previously declared uninhabitable following an availability. Nonetheless, the CO, XO, and CMC should have taken greater action to ensure the ship and its systems were ready for crew move aboard. They neglected to properly plan prior to commencing crew move aboard, which contributed to the confused personnel accountability and combustible storage issues the morning of the fire. [249-254, 655-668]

102. The failure to adjust availability milestones and the project completion date despite clear evidence that the LMA would not execute contractual obligations on time drove action to meet subjective deadlines, which arbitrarily increased risk. Overly optimistic milestone dates for the availability, rather than realistic expected completion dates, drove decisions regarding fuel onload and moving BONHOMME RICHARD's crew off the barge. These shifting dates also pressured the maintenance team to sequence milestones out of the standard COMUSFLTFORCOMINST 4790.3 order, which introduced additional risk. Aggravating matters, SWRMC's maintenance professionals normalized acceptance of these associated risks, which contributed to BONHOMME RICHARD's failure to recognize the danger. [244-254, 655-668]

103. The shift from NASSCO to Naval Base San Diego (NBSD) Pier 2 in December 2019 significantly changed the fire safety posture of the ship, but BONHOMME RICHARD, SWRMC, NASSCO, and NBSD took little action to account for this shift. The SWRMC CO, CAPT David Hart, and BONHOMME RICHARD CO never took action to update the applicable Memorandums of Agreement (MOA) between the ship and SWRMC to address the pier shifts, and no one from Ship's Force, SWRMC, NASSCO, or NBSD took action to prepare the ship for the many differences between NASSCO and Pier 2, leaving Ship's Force unaware of their new environment. [245, 432-438, 536, 537, Appendix E: BONHOMME RICHARD FSC Minutes]

104. Across BONHOMME RICHARD leadership, the acceptance that fire stations in IEM could still be employed in case of an emergency demonstrates a normalization of deviation from standards by the ship's DC leadership. While the BONHOMME RICHARD CO was reporting

via Docking Phased Maintenance Availability (DPMA) Situational Reports (SITREPS) that the firemain system restoration work had been completed on 1 April 2020, the crew had removed only 12.5 percent of the fire stations from IEM. This demonstrates a willingness to accept significant risk despite having a major system in an unknown readiness condition to fight a fire. [293, 313-315, 317, 328]

105. Ship's Force, NASSCO, and SWRMC consistently failed to recognize and address fire safety risks in the vehicle spaces that accumulated throughout the availability. Without full AFFF coverage, there was no mitigation associated with maintaining fueled vehicles in Lower V. Further, the scaffolding in Upper V that blocked the installed sprinkling system was significantly beyond what was required for ongoing work and limited the utility of the system. There were multiple opportunities for Ship's Force, NASSCO, and SWRMC to reassess risk levels and raise concerns in advance of fuel onload and crew move aboard, but these risks and concerns were never identified. [258, 271, 276, 277, 402, 446, 453, 462, 464, 472, 699]

106. While at NBSD, BONHOMME RICHARD's failure to maintain a third brow or consider any mitigation measures, as required under 8010 Manual paragraph 10.1.4, limited available egress and access points during firefighting efforts. Although this requirement was discussed by the FSC and subsequently waived, there were no discussions on how to mitigate the risk of having two brows. The FSC and Ship's Force should have considered the potential impact of only having two brows on the ship's fire safety posture. The lack of a third brow proved to be a significant factor limiting egress and access to the ship on the morning of the fire. [65, 101, 173-175, 432-438]

PHIBRON

107. The PHIBRON was the operational commander directly over BONHOMME RICHARD. The PHIBRON provided a level of oversight of the ship to monitor the crew's training and progress of the availability, consistent with operational tasking in the designated role and responsibilities from ESG-3. Because the delegated duties from ESG-3 were operational and the ship was still in the maintenance phase, the PHIBRON had no written requirement to conduct the same level of manning, training and equipment status oversight as would be expected from the assigned ADCON commander directly over the ship, in this case CNSP. Within the bounds of the interviews conducted, though not codified in any formal documentation, every interviewee stated the PHIBRON was conducting oversight. The extent of that oversight and whether it satisfied the expectations that would flow from the administrative chain of command was less clear. [214-218, 337-339, 592-601, 603, 611-613]

108. When the PHIBRON conducted oversight of BONHOMME RICHARD's availability, it did not consider whether it was carrying out an OPCON or ADCON function. The only consistent and written guidance provided to PHIBRON regarding the expected level of oversight to be provided to the BONHOMME RICHARD came from ESG-3, the OPCON ISIC. This left PHIBRON with clear commanders guidance to execute the oversight required of an operational

commander throughout BONHOMME RICHARD's availability. Despite being the immediate superior in command, CNSP did not exercise their direct ADCON responsibility for oversight of BONHOMME RICHARD's availability nor did they provide codified direction to PHIBRON to act on its behalf. [214-218, 592-601, 603, 611-618, 638, 639]

109. PHIBRON's role as the operational commander for BONHOMME RICHARD when the ship is in an availability is not well defined, but the periodic presence of Commander, Amphibious Squadron FIVE's (PHIBRON-5's) CSO and N4 walking the ship, inspecting spaces, and identifying issues caused Ship's Force to correct some deficiencies. However, the PHIBRON lacked a full understanding of the 8010 Manual fire safety requirements when conducting their oversight of the ship. This directly led to the PHIBRON accepting minimal systems online to comply with COMUSFLTFORCOMINST 4790.3 standards instead of requiring the restoration of firefighting systems to protect all fuel system components and spaces in accordance with the 8010 Manual when they brought fuel on the ship in April 2020. While the PHIBRON was not attempting to, nor required to, oversee BONHOMME RICHARD's overall fire safety posture throughout the various phases of the availability, the PHIBRON's concurrence with decisions like moving forward with fuel onload constituted a missed opportunity for forceful backup to the project team. Mitigating this, the accurate status of the AFFF system just before fuel onboard was not provided to the PHIBRON representatives. Although the PHIBRON executed an active oversight role as the operational commander, they did not do enough to identify and course correct the numerous deficiencies of the BONHOMME RICHARD. [215, 336-339, 592-613]

110. The roles and responsibilities to execute ADCON duties for a major command amphibious assault ship falling under CNSP by the OPNAVINST 5400.45 are not well codified. This ambiguity coupled with the absence of written guidance from CNSP to the PHIBRONs directing delegation of ADCON duties contributed to a lack of proper oversight for the ship. Furthermore, because the PHIBRON was executing a significant level of oversight beyond what is expected of an operational commander, this provided a sense that BONHOMME RICHARD was receiving the full level of supervision that is expected of a ship that has an operational and administrative commander. The success of CNSP, PHIBRON, and the BONHOMME RICHARD command relationships are dependent on personalities and subject to change, further demonstrating the need to delineate a written chain of command with assigned duties. Once the command and control is formalized, this codification may further illuminate manning deficiencies for specified roles within these organizations. [593-600, 614-618, 637-639]

ESG-3

111. ESG-3 was the operational commander two echelons above BONHOMME RICHARD and they provided the correct level of oversight of the ship consistent with their designated role and responsibilities from Commander, U.S. THIRD Fleet (C3F) and the Required Operational Capabilities and Projected Operational Environment for Expeditionary Strike Group Staffs (ROC/POE). [216, 217, 640, 642, 645, 647]

112. ESG-3's role as an operational commander for BONHOMME RICHARD while the ship is in an availability is not well defined. Because the ship was still in the maintenance phase, the level of engagement with BONHOMME RICHARD coupled with the delegated duties to the subordinate PHIBRON satisfied their responsibilities. [598, 640-642, 645, 647]

CNSP

113. In accordance with the OPNAVINST 5400.45, CNSP is the direct ADCON commander of BONHOMME RICHARD responsible for oversight, which includes all manning, training, and equipping requirements as well as supervising the availability. CNSP is also the direct ADCON commander of PHIBRON-5, but the Standard Navy Distribution List (SNDL) does not place BONHOMME RICHARD as a subordinate underneath the PHIBRON. Although there is a practice for the PHIBRON to provide some of the ADCON oversight of the BONHOMME RICHARD on behalf of CNSP, the lack of formalized relationships caused significant confusion on the oversight and responsibility roles. If the ADCON command and control was documented, it would have resulted in greater and consistent oversight of BONHOMME RICHARD. [214-216, 593-600]

114. There is significant confusion regarding the oversight responsibility at all levels for BONHOMME RICHARD through the different phases of the ship's cycle. Despite considerable agreement that PHIBRON-5 serves as the direct ADCON ISIC to BONHOMME RICHARD, there is no written designation of that role. Additionally, CNSP has not adequately outlined the responsibilities PHIBRON-5 must execute on its behalf as the ADCON ISIC to BONHOMME RICHARD. Further complicating matters, ESG-3, an operational command, has been executing some administrative oversight, to include tracking the availability, advising on major decisions, and advocating for the ship to CNSP. This role derives generally from the ROC/POE; however, it has largely been driven by personalities and priorities of commanders and is not clearly defined. Moreover, the oversight responsibilities for BONHOMME RICHARD's availability are not well delineated between PHIBRON and ESG-3. This confusion around responsibility for BONHOMME RICHARD's availability contributed to a lack of effective oversight of the ship. [214-217, 593-605, 611-613, 615-618, 639-642, 645-647]

115. There is limited TYCOM and ISIC oversight of fire safety risk accumulation. CNSP has given ISICs no specific guidance regarding how fire safety oversight during an availability should be carried out. In particular, CNSP N7 specifically stops tracking DC readiness for a ship in an availability and CNSP N43 takes no action to account for this lack of oversight. Further, CNSP N43 monitors progress of work items associated with the fire posture of the ship for the purpose of how they may impact the completion of the availability, but not with a focus on risk to the ship and crew during the availability execution. Thus, there is no organization effectively carrying out this oversight role. [593-600, 614-639]

116. Before the fire, CNSP allowed a fire safety framework to exist where ship COs experience significant pressure to meet time and schedule milestones with little training or support to ensure

safety requirements are maintained. As result, COs knowingly or unknowingly accumulate significant risk of a major fire beyond what is acceptable compared to Navy policy. [253, 254, 592-600, 614-639, 694-707]

117. Despite serving as leaders of the maintenance team, CNSP Port Engineers are not on the FSC, and all fire safety decisions are made at the hands of the FSC. The lack of CNSP Port Engineer participation limits CNSP's visibility on fire safety and removes a crucial opportunity for CNSP to mitigate risk accumulation. [593-600, 628, 629, 631-633]

PACFLT

118. (b) (5) [redacted]

B. NAVSEA, CNRMC, and SWRMC Oversight and Responsibilities

SWRMC

119. The SWRMC CO has absolute responsibility for the safety, wellbeing, and efficiency of his command. He failed to execute this responsibility by accepting the poor material condition of BONHOMME RICHARD throughout the availability, and in particular from the time it re-positioned to NBSD in December 2019 through 12 July 2020. SWRMC must vigilantly work to support all COs in the mission to sustain the fire safety of their ships in availabilities, but the SWRMC CO failed to recognize this responsibility. The 8010 Manual specifically requires Regional Maintenance Center (RMC) personnel to concur with every fire safety decision through the FSC, which results in the RMC owning fire risk responsibility. This responsibility was also codified in the MOA between BONHOMME RICHARD and SWRMC. The Fire Safety Officer (FSO) and Project Manager (PM), both representing SWRMC, were responsible for implementing the requirements of the 8010 Manual but repeatedly failed to effectively execute this core part of the mission. [220, 435, 450, 669-672, 683, 694-707]

120. SWRMC accepted and fostered a culture of emphasizing costs and scheduling above personnel and ship safety. With the exception of individual ship COs, no one that attended the weekly SWRMC availability update meeting recalled safety issues being brought up for discussion and action, which reflects a lack of focus on safety by SWRMC. The operations department (Code 300), providing availability project management, considers safety the responsibility of Code 106, which represents a lack of prioritization towards fire safety. Structurally separating safety from execution is not only contrary to the 8010 Manual, it further represents how SWRMC systemically relegated fire safety so it would not impact production. [435, 683, 694-707, 739]

121. SWRMC's assumption of some Ship Repair and/or Construction Activities (SRCA) responsibilities under the 8010 Manual included the role of the FSO, which adversely impacted

the efficacy of all stakeholders in managing risk for BONHOMME RICHARD's availability. The LMA, in this case NASSCO, should have had representation at the FSC because the 8010 Manual clearly intends for the entity conducting the majority of the actual work to be involved in fire risk decisions. Although directed by Commander, Navy Region Maintenance Center (CNRMC), the assumption of SRCA responsibilities further concentrated many risk decisions into SWRMC, who lacked an appreciation for their modified role as NSA and SRCA and moved them closer to being a single point of failure. [435, 451, 671-673, 676-683, 694-707]

122. SWRMC failed to fulfill the requirements of Section 1.4.2 of the 8010 Manual, which requires the NSA to ensure implementation of 8010 Manual requirements. SWRMC further accepted responsibility for implementation of requirements during BONHOMME RICHARD's availability when it assigned these responsibilities to the FSO. Throughout the availability neither the FSO nor SWRMC effectively worked toward holding Ship's Force personnel accountable for the actions required in the 8010 Manual. Because the 8010 Manual, section 1.2.4, is only invoked on the ship for SRCA work, the ship in many cases was unaware of the details contained within the 8010 Manual. A lack of understanding of the 8010 Manual requirements by a ship does not absolve the NSA of its responsibility to enforce the 8010 Manual. The position held by the SWRMC CO that the risk for deviations from the 8010 Manual resides solely with a ship's CO demonstrates a lack of understanding of the intent behind the 8010 Manual and the modified position that SWRMC occupied as the NSA and SRCA. [435, 450, 469-471, 669-673, 694-707]

123. SWRMC failed to properly maintain a CDO program and hindered its ability to respond to casualties. This led to significant delays in the SWRMC response on the day of the fire. The senior board member for CDO qualifications was the Senior Watch Officer (SWO), a Senior Chief, and there was no formal training on the expected response during a fire. The radio communication plan relied on the CDO delivering SWRMC radios to a ship during a fire, yet the CDO was permitted to depart NBSD and stay at his or her residence during a duty day. This precludes effective communications from being rapidly established in response to a fire. The poor utilization of their weekend duty personnel rendered SWRMC a non-participant during the crucial first hours of the casualty, as the SWRMC CDO did not arrive and activate the SWRMC Emergency Response Team (ERT) until more than two hours into the casualty. [114, 115, 693, 709]

124. Critical SWRMC employees assigned to availability project teams lacked proper background and experience, further impacting their efficacy to fulfill the mission. As an example, BONHOMME RICHARD's PM had five years of SWRMC experience as a Shipbuilding Specialist and previously served six years in the Navy as a junior Aviation Ordinanceman. She failed to complete any required PM trainings, and despite this minimal experience, she managed a $300 million availability. [453, 695]

125. SWRMC allowed staffing shortfalls to persist in critical areas, which left SWRMC's Contractor Fire Safety Officer (CFSO) operating without proper management control. By

leaving the government FSO and the Code 106B branch head billets open, SWRMC demonstrated a lack of prioritization toward fire safety, which left the fire safety program without adequate government leadership. Furthermore, the failure to fill empty billets for Code 106B and Government FSO by the Code 106 Department Head, (b) (6), contributed to these oversight failures. [597, 680-682, 698-706]

126. SWRMC utilization of contractors from United Support Services Corporation (USS Inc.) to fill FSO responsibilities was executed without adequately addressing the limitations of contractors vice government employees. The inability to direct the prime contractor (a reserved government function) or formally vote as Chairman of the FSC are key examples of such limitations. As a member of the PT, their status as a contractor was further subjected to the direction of the PM or other government employees, making it unlikely they could effectively act as arbiters of risk decisions. This further contributed to fire risk accumulation on BONHOMME RICHARD. [456-459, 698-701]

127. SWRMC failed to adequately oversee the USS Inc. CFSOs. There was an example of a forged FSO letter of designation for the duties with regard to specific ships, and unqualified individuals conducted FSO qualification boards. The record reflects SWRMC permitted an ineffective FSO qualification program to exist, which failed to support standards for fire safety oversight across the waterfront. [456-459, 698-702]

128. SWRMC did not exercise proper management oversight of the FSOs' execution of safety walkthroughs aboard BONHOMME RICHARD, which contributed to a failure to identify and address fire risk. Additionally, SWRMC did not utilize walkthrough findings to ensure safety during availabilities. The lack of formal government employee review of walkthrough discrepancies and performance trend analysis of discrepancies was contrary to the 8010 Manual, Section 2.4.3, and enabled unsafe operations. Contributing to the safety walkthrough program's ineffectiveness was the lack of attention to Ship's Force, as demonstrated by only 14 of 2,693 contractor noted discrepancies being written against BONHOMME RICHARD Ship's Force. [469-472, 702]

129. The qualification process for SWRMC personnel assigned to the FSC positions failed to ensure that personnel had the requisite skills for making appropriate risk calculation decisions. The BONHOMME RICHARD PM neither had formal training nor completed the proper certification for her position. Moreover, the qualification process for the FSOs within SWRMC is inadequate. The personnel in these positions did not possess the background to appropriately make the weighty decisions entrusted to them, which allowed for significant fire risk accumulation to occur on BONHOMME RICHARD. [453, 456-460]

130. Because the 8010 Manual was not fully applied and executed, the FSC proved deficient in both composition and conduct during BONHOMME RICHARD's availability. SWRMC's misunderstanding that the Project Support Engineer (PSE) was not a required member of the FSC removed the connection between the decisions regarding fire protection and the engineering

department (Code 200), which would have provided technical expertise. More importantly, reducing the FSC meeting to an informal routing of paper vice a substantive discussion requiring a formal vote on issues as required by the 8010 Manual systemically hindered any evaluation of the risk level assumed by FSC decisions. [452, 455, 462, 687, 688, 694, 697, 699, 700]

131. The BONHOMME RICHARD FSC did not consider the cumulative effect of its decisions or assess the overall fire safety posture, which placed the ship in a compromised position. The FSC's actions were often reduced to paper without any discussion between members, which relegated their responsibilities to documenting the ship's condition instead of focusing on the effect on the ship's fire risk and contemplating mitigation measures. As the availability progressed and members of the FSC rotated in and out, the new members did not review the previous FSC minutes, causing them to lack an understanding to the ship's fire risk posture and diminished their ability to mitigate risk to the ship. [336, 424-427, 435, 451-477, 481, 484, 487, 488, 492, 493, 694-707]

132. At one point, SWRMC correctly identified that the FSC was empowered to waive too many requirements at the project level and advocated to push these decisions to a higher level. Although NAVSEA disagreed, SWRMC should have pursued additional courses of action to ensure critical decisions on 8010 Manual requirements were addressed properly. The proposal to create an Executive FSC at the Department Head level may have positively changed behaviors regarding the risk posture accepted in availabilities. [707]

133. BONHOMME RICHARD FSC members lacked an adequate level of experience and seniority to properly identify, mitigate, and communicate fire risk accumulation. The primary CFSO was a former civilian firefighter with no shipboard experience who also had five years in the Navy prior to separating as an E-4 without any DC background. The PM had no prior Navy maintenance experience. For the 60 FSC meetings, the Ship's Force representative was a second tour LT 14 times, but on six occasions, the sole ship representative was a DC Chief Petty Officer (CPO), which is contrary to the 8010 Manual requirement for the ship to be represented by a commissioned officer. As the entity most responsible for ensuring the FSC is properly constituted, SWRMC's failure to address this issue on multiple occasions represents a significant lapse in meeting their mission. [451-453, 455, 456, 460]

134. The BONHOMME RICHARD FSC authorized deviations from the 8010 Manual requirements without mitigation, and in many instances there was no evidence the FSC even contemplated mitigation. Moreover, the Ship's Force representative consistently failed to notify the BONHOMME RICHARD CO of the FSC's decisions, and the meeting minutes did not capture the FSC's decisions or mitigation actions, leaving the CO unaware of accumulating risks. As the principal Ship's Force representative on the FSC, the DCA lacked a basic understanding of the 8010 Manual, the role of the FSC, and the importance of his role. Because the CO had never read the 8010 Manual and felt that it was SWRMC's role to support his fire safety posture, he negligently relieved himself of the continued responsibility for the safety, well-being, and efficiency of the ship. As the command that is primarily responsible to execute availabilities,

SWRMC should have been more attuned to the CO's ability to lead BONHOMME RICHARD and its crew through this phase. [118, 234, 240, 243, 436, 444, 451-468, 476]

135. The BONHOMME RICHARD FSC, contrary to Section 7.1.1 of the 8010 Manual, authorized ship's permanent firefighting systems to be out of service during periods of time when not necessitated for maintenance. This systemic disregard of the 8010 Manual mandate to keep firefighting systems up as much as practicable demonstrates a lack of understanding of the 8010 Manual's purpose and the scope of the FSC's authority to waive requirements by identifying mitigation actions. This SWRMC standard practice to consistently take down entire firefighting systems without adequate mitigations directly contributed to heightened fire risk. Moreover, this practice illustrates SWRMC's failure as the NSA and SRCA, which directly contributed to the ship's firefighting system configuration on the morning of 12 July 2020. [291-400, 424, 427, 436, 455, 462, 465-467]

136. Since 2018, the 8010 Manual fire drills coordinated through SWRMC have been scripted and not realistic to recent fires that have occurred, directly contributing to the poor readiness posture of BONHOMME RICHARD's crew. These drills provided minimal value to appraise the crew or prepare them for an actual event. The 8010 Manual Chapter 12 and 13 drills are conducted to ensure passing score and not to delay production work, which is contrary to their purpose. [737-742, 746, 748]

137. SWRMC's FRP was not comprehensive, effective, or fully compliant with the requirements of 8010 Manual Chapter 3. SWRMC, as the NSA, was not required to issue an FRP; however, because SWRMC assumed this SRCA duty with little consideration, SWRMC then became responsible for the FRP. Contrary to paragraph 3.2.5 of the 8010 Manual, SWRMC's FRP does not address any strategy for establishing an integrated hose team comprised of Ship's Force, Fire and Emergency Service (F&ES), and mutual aid personnel, which contributed to the integration failures on the morning of 12 July 2020. [708, 883-885, 1013]

138. The SWRMC FRP in use for BONHOMME RICHARD at Pier 2 was incomplete when compared to the 8010 Manual, had not been drilled since the A+30 date, and was not well known by the ship. Despite having been reviewed as adequate during the 2018 and 2020 CNRMC Fleet Maintenance Activity Assessments (FMAA), the FRP is missing several crucial elements required by the 8010 Manual. The MOA with SWRMC requires that the attributes of the SWRMC FRP be included in drill packages for 8010 Manual Chapter 12 and 13 drills conducted aboard the ship, but did not implement all other requirements. [671, 673, 698, 708, 847, 958]

139. SWRMC had not properly addressed the unique circumstances associated with availabilities shifting berths between NBSD and private shipyards on the San Diego waterfront. While the FRP requirements of the 8010 Manual are assigned to the SRCA, which is intended to be the LMA by instruction, it would be inappropriate for a private shipyard to direct the requirements for integration with FEDFIRE and NBSD support. Similarly, SWRMC is limited in its ability to direct 8010 Manual requirements through the FRP for a private shipyard LMA which is not in

the NAVSEA Standard Items (NSI) or contract. Shifting the FRP applicability is not envisioned by the 8010 Manual as written. There is no requirement to conduct an 8010 Manual Chapter 12 drill following a berth shift to exercise or verify the FRP's efficacy. [489, 478, 708, 755, 761]

140. The SWRMC FRP does not address the dynamic nature of an availability, and is therefore unable to account for the various phases of an availability. The SWRMC FRP is a command instruction which, contrary to 8010 Manual section 3.2.16, does not differentiate between ever changing configurations of the ship nor account for the fire risk decisions by the FSC. If SWRMC had properly prepared the FRP by tailoring and drilling to the challenges of availabilities like BONHOMME RICHARD's availability, initial firefighting efforts would have been more effective. [708, 712-715, 733, 737-743, 748]

141. The SWRMC interoperability radio communication plan proved inadequate and was not effective on 12 July 2020. SWRMC never properly implemented 8010 Manual Section 3.2.22 requirements and relied on physically transferring radios from SWRMC to the scene of the fire. Additionally, NAVSEA did not issue a formal waiver for this requirement in the 8010 Manual and the FSC did not adjudicate the requirement as a local deviation. [709-711, 795]

142. The use of aramid lines throughout the ship, contrary to 8010 Manual 10.4.4 technical requirements, created a risk to first responders when the aramid lines melted and fell during the fire, also creating access challenges. This improper use of aramid lines was reviewed by CNRMC and NAVSEA after the issue was raised by a local trade organization, prompting the Technical Warrant Holder (TWH) to assert such use was noncompliant with the 8010 Manual and NSI, which represented a direct hazard to responding firefighters. Despite the NAVSEA TWH's guidance on the use of aramid lines, CNRMC disregarded this input and instructed SWRMC to continue with the use of aramid lines on all surface ships, to include BONHOMME RICHARD. [193, 763, 764, 795, 1115]

143. The preparation work necessary for the ship to execute fuel onload was not properly assessed or verified, and there was a failure to obtain the FSC's concurrence as required by the 8010 Manual. Ship's Force, and in particular the CO, XO, CHENG, and DCA, should have used this opportunity to assess the level of DC readiness and verify all required systems were fully operational. Similarly, fuel onload should have prompted members of the FSC to review the ship's fire safety posture. The minimal efforts by Ship's Force and the FSC members regarding fuel onload in the context of fire safety and ship's systems are an exemplar of ineffective decision making and maintenance practices, which culminated in the ship certifying a degraded AFFF system prior to fuel onload. [332, 336, 340, 341, 352, 353, 359-367, 378]

144. The current execution of maintenance functions by SWRMC, and the oversight of those activities by NAVSEA and CNRMC, allows some critical functions to operate below the visibility of the RMC COs. The current organizational structure was modified after 2000 to consolidate maintenance work solely under RMCs, but that work was previously spread across different organizations. Further realignment occurred when CNRMC was stood up in 2010 and

managerial control of operations was shifted from NAVSEA 04 to CNRMC. The impacts and efficacy of this consolidation was reviewed by the Navy as part of the Balisle report. Although not causal to this incident, understanding the history of this consolidation and the benefits and trade-offs that accompanied that shift may be useful. There are no instructions establishing mission, functions, and tasks for RMC or CNRMC either, which demonstrates the informal nature of these organizations. [672, 674]

NASSCO

145. As the LMA for this availability, NASSCO fulfilled NSI fire safety requirements to the standards established by SWRMC. While some deviations from the NSIs were discovered during this investigation, with the lack of a backup generator being the most significant, these deviations were largely unknown to SWRMC employees until noted by the investigation team. Further, NASSCO provided documentation to substantiate meeting requirements, to include fire safety walkthroughs, and SWRMC personnel did not identify significant compliance issues during interviews. While the storage of contractor material throughout the ship contributed to the magnitude of fire, there is no indication that any of this storage deviated from the general practices of the ship and SWRMC or contrary to direction. [244, 245, 251, 259, 260, 264, 265, 288-294, 432, 471]

CNRMC

146. CNRMC, as the immediate commander over SWRMC, is responsible for the satisfactory accomplishment of the mission assigned to all RMCs across the Navy. As part of CNRMC's oversight responsibilities, CNRMC is required to conduct safety audits, assess trends, and coordinate on fire drills, but their safety code is not sufficiently manned to accomplish their oversight role and meet these requirements. CNRMC's minimal manning in their safety code contributed towards SWRMC's ineffective execution of their fire safety mission. CNRMC's failure to effectively oversee the SWRMC safety program contributed to many of the poor practices that occurred throughout the BONHOMME RICHARD availability. [219, 468, 751, 754, 765-768, 1140, 1141]

147. CNRMC's 8010 Manual implementation, accomplished at the NAVSEA Commander's direction in 2014, focused on the actions that could be accomplished contractually through NSI. In the years since the 8010 Manual was issued, reviews have focused on contractor actions rather than providing guidance or validation of actions to be performed by RMCs or Ship's Force. By focusing solely on the responsibilities of the contractor in 8010 Manual reviews, CNRMC did not recognize the lack of compliance or enforcement toward the actions of the RMCs or ships. [756, 761, 773-777, 1116-1124, 1134, 1144, 1146-1148, 1150]

148. CNRMC identified deficiencies in 8010 Manual compliance at multiple RMCs but failed to bring subordinate organizations into compliance. The CNRMC Safety Director knew radios used at RMCs were not compliant and considered it a longstanding issue, which he discussed

with Commander, Navy Installations Command (CNIC). Despite knowing there was a deficiency, the CNRMC Safety Director did not document this issue on the FMAAs conducted by the SWRMC fire safety program in 2018 or 2020. This exemplifies a normalization of deviations. [434, 711, 1129]

149. Contrary to the contents of the 8010 Manual, CNRMC did not assess this document as a technical manual, which contributed to SWRMC's poor adherence to the various requirements therein. [697, 699, 700, 702, 762]

150. Resource sponsorship of fire safety is spread across multiple budget submitting offices, which impacts shipboard fire safety in an availability. This contributed to the incomplete execution of the 8010 Manual at the RMCs. CNRMC failed to effectively advocate for the full and consistent funding of FSOs across all RMCs. Contributing to this, CNRMC did not standardize FSO programs across the RMCs, resulting in disparate funding requirements. [222, 683-689]

151. CNRMC audits have created a false confidence in RMC compliance with the 8010 Manual. Audits of RMCs (other than those located within Naval Shipyards) are conducted with vastly fewer resources than those performed by NAVSEA 04. The FMAAs performed by CNRMC are completed with 1 – 2 personnel, and they are required to examine occupational health and safety and environmental safety in addition to fire safety. The lack of deficiencies noted during FMAAs have created a misleading perception that RMCs are compliant with the 8010 Manual despite SWRMC's consistent failure to meet multiple requirements. [751, 754, 1138, 1140-1142, 1144]

152. CNRMC's structure as an echelon 3 command subordinate to NAVSEA with only 48 government billets is not effective in executing the required oversight of the RMCs. The current structure tasks CNRMC with responsibilities for surface ship maintenance without providing sufficient authority or resources to carry out its mission. [221, 751, 753, 754]

153. CNRMC's removal of leadership billets from Norfolk, Virginia has resulted in a lack of attention to the day-to-day operations of CNRMC. When coupled with the dual-hatting of NAVSEA 21 and CNRMC in a single flag officer, the colocation of leadership with NAVSEA, away from the CNRMC staff, leaves a single GS-15 in Norfolk with authorities and capabilities unmatched to the responsibilities required of the role. The decision to move the CNRMC Executive Director (ED) to Washington D.C. consolidated all executive leadership away from CNRMC's Norfolk headquarters. [221, 752-754]

154. Low probability events with catastrophic results require independent oversight that ensures long-term safety is not compromised at the cost of achieving short-term execution goals. Although there are multiple ways to provide oversight of the RMCs, Navy Regional Maintenance Office (NRMO) proved to be an effective organization that maintained a strategic view of the NAVSEA mission with a surgical approach towards identifying and addressing particular issues that greatly enhanced fire safety. Despite a successful track record, the efficacy

and value of NRMO is not widely recognized by senior leaders. However, the consequence of disbanding NRMO was that they were the only organization with a technical focus tasked with independently ensuring organizational compliance. NRMO proved crucial at advancing several 8010 Manual deficiencies and driving completion. In NRMO's absence, no organization continued pushing for similar improvements. [763-772]

155. When the transition from Multi-Ship Multi Option (MSMO) to Multi-Award Contract/Multi-Order (MAC-MO) contracting occurred, NAVSEA, CNRMC, or SWRMC did not consider the effect this would have on existing fire safety policy. This shift resulted in LMAs being assigned far later in the contracting process and inhibited the ability of NSAs to address unplanned for fire safety issues beyond the strict terms of the contract. [781-786]

NAVSEA

156. Ownership of the 8010 Manual has distanced TWHs from the requirements generated, reducing the connection between the TWH and implementation. While NAVSEA 04 possesses ownership of the 8010 Manual, it contains requirements generated by, and under the cognizance of, several other stakeholders both internal and external to NAVSEA. This ownership bifurcation of the 8010 Manual has impeded NAVSEA from being able to fully recognize deviations and other challenges associated with the RMCs meeting these requirements. Moreover, given that NAVSEA assesses the 8010 Manual is a technical document, better alignment with the TWHs at Headquarters (HQ) would ensure greater adherence to meeting requirements. [795, 796, 1115, 1130-1135]

157. By allowing the FSC to approve deviations without any higher approval authority, NAVSEA has removed the opportunity for appropriate adjudication of risk. SWRMC formally raised concerns regarding this issue to NAVSEA, which showed SWRMC recognized risk accumulation was being adjudicated at too low of a level. NAVSEA's stated expectation that they would receive waivers for deviations directly contradicted guidance formally provided to SWRMC. NAVSEA missed opportunities to formalize a process for 8010 Manual deviations, which would have raised visibility on risk accumulation issues throughout the RMCs. Contributing to this, NAVSEA 05 TWHs associated with the 8010 Manual acknowledge deviations to technical requirements should be raised to them for adjudication. However, none of the TWHs could provide any deviation requests associated with an availability executed by a private yard with an RMC acting as the NSA and coming to them for adjudication. [707, 780, 1133]

158. NAVSEA 02 is responsible for inclusion of all 8010 Manual requirements in the solicitation for the contracts coming from their office but failed to do so in some instances. While CNRMC has attempted to enforce items, which could be required by an NSI in place, several items require a higher level of contractual action; specifically, the assignment of SCRA responsibilities to the private shipyard. Without NAVSEA 02 upholding 8010 Manual requirements for these

contracts, there is a risk ships would continue to be exposed to an unacceptable fire posture. [761, 773-785]

C. CNIC, CNRSW, NBSD, and FEDFIRE Oversight and Responsibilities

NBSD

159. Consistent with OPNAVINST 11320.23G, Chapter 1, the NBSD CO is responsible for maintaining a F&ES program on his/her installation, to include integration with the surrounding mutual aid firefighting entities. The NBSD CO, CAPT Mark Nieswiadomy, did not fully execute this role because he failed to ensure all FEDFIRE requirements were satisfied for integrated training with Ship's Force and the NSA for ships in an availability. This failure directly contributed to the poor FEDFIRE integration that occurred during the initial hours of the fire on 12 July 2020. [923-933]

160. The NBSD CO, through the NBSD Emergency Management Officer (EMO), failed to ensure NBSD's Mutual Aid agreement (MAA) with the various local firefighting organization was current, exercised, and effective for facilitating an integrated shipboard fire response. NBSD CO's failure to ensure the NBSD's MAA with San Diego Fire Department (SDFD) was reviewed and updated contributed to FEDFIRE's lack of understanding and appreciation to the capabilities and limitations that SDFD could bring to a shipboard fire response. SDFD's policies limit their ability to go aboard a ship to fight a fire when no risk to life is present, which was not clear to all FEDFIRE and BONHOMME RICHARD personnel during the fire and confused the coordination between these entities on 12 July 2020. The NBSD CO's failure to meet requirements for MAAs was due in part to the ambiguity of responsibilities under FEDFIRE's Metro Area construct. [141, 145, 223-227, 936-948]

161. The NBSD Emergency Operations Center (EOC) did not adequately exercise 8010 Manual drills or have an adequate response plan for a major shipboard fire, which reduced the EOC's effectiveness during the fire. NBSD relied on the installation Emergency Management (EM) plan's Hazard-Specific Appendix for shipboard fires, which did not incorporate OPNAVINST 3440.18, the SWRMC FRP, or any requirements for coordination with SWRMC. The shipboard fire appendix also assumed that most shipboard fires would be contained quickly and require limited manpower and resources from NBSD. This illustrates that the NBSD never adequately exercised the EOC during 8010 Manual drills, as these deficiencies should have been discovered in a training environment. FEDFIRE's failure to coordinate with NBSD on drafting the EM plan further contributed to these planning deficiencies, which ultimately left the EOC without a strategy to coordinate the response effort on 12 July 2020. Moreover, these deficiencies represent a failure by the NBSD CO to provide effective oversight on the EOC's participation during 8010 Manual drills. [223-227, 939-960]

162. The NBSD CO failed to ensure effective coordination between the EOC and the SWRMC Emergency Control Center (ECC) before and during the fire. On the first full day of the fire, the

EOC and the ECC were unaware of their respective roles as well as how to interact with each other during the fire, which reduced efficiency and caused delays in providing support to firefighting efforts on the pier. Given that these issues were not identified prior to the fire, this further demonstrates that the drills conducted by NBSD prior to the fire lacked rigor and failed to overcome basic shortcomings. Moreover, these deficiencies further represent a failure by the NBSD CO to provide effective oversight on the EOC's participation in 8010 Manual drills. [111-126, 939-960]

163. Per OPNAVINST 11320.23G, FEDFIRE is required to conduct appropriate training and drills aboard all types of naval vessels on the installation, but this requirement was not known or widely recognized by FEDFIRE or NBSD leadership. This lack of awareness to these requirements demonstrated that the NBSD CO did not exercise proper oversight of the F&ES program for the installation. [923-931, 1006, 1008-1014]

164. The NBSD CO did not have an appropriate awareness of the maintenance activities and level of maintenance happening on ships onboard the installation, which contributed to installation inaction on a variety of issues. The lack of firemain on Pier 2, which is consistent across all NBSD piers, was not viewed as a concern prior to the fire despite the recent pierside fire on USS CHAMPION (MCM-4) in November 2019. Moreover, the NBSD CO did not have appropriate awareness of many other critical issues associated with maintenance activities onboard the installation. The NBSD CO incorrectly assessed he had a limited role in the maintenance activities happening on Pier 2, reasoning that the installation is not appropriately resourced to take on additional oversight. In light of multiple major availabilities being conducted on NBSD in the past five years, coupled with the fire on CHAMPION in November 2019, the NBSD CO should have taken more steps to address the fire safety posture of piers and direct installation personnel to be more involved in oversight of these maintenance activities. [49, 961-986]

165. Prior to the fire, the NBSD CO, through the NBSD port operations department, lacked fidelity over the availability status of ships onboard NBSD. Specifically, the pier laydown process and inspection program did not effectively identify and take appropriate action on potential fire safety risks for ships undergoing a maintenance availabilities. Instead the focus was on general safety and environmental issues, which contributed to the accumulation of fire safety risk. The NBSD port operations department and the NBSD CO expressed that enforcement of infractions against contractors was difficult, but failed to take effective actions to address this difficulty. While enforcement of pier safety infractions against contractors may be limited by contractual provisions, this does not relieve the NBSD CO from his responsibilities for overseeing installation fire safety and fire prevention. While NBSD has since instituted new practices to conduct pier inspections, the NBSD CO did not exercise sufficient oversight over the pier laydown and pier inspection program with respect to fire prevention for ships in an availability status. [961-986]

FEDFIRE Metro Area

166. The lack of implementing guidance on the roles and responsibilities under the FEDFIRE Metro Area created seams and gaps in oversight and execution of their mission. Although designed to capitalize on efficiencies, the Metro Area construct placed a significant amount of responsibility on one FEDFIRE Chief who was accountable to multiple installations. Simultaneously, the Metro construct limits the ability of supported installation COs to exercise sufficient visibility and control over how FEDFIRE personnel within the Metro Area are tasked on a daily basis to meet the various missions of each installation. While the Metro Area construct is permissible under OPNAVINST 11320.23 and exists in other Regions, the current model in San Diego has proven ineffective because it lacks clarification on the roles and responsibilities for each installation CO, the Metro Area Fire Chief, and Region. The inconsistent understanding of the command and control relationship between NBSD, the Metro Area Fire Chief, and Region directly contributed to an environment where FEDFIRE personnel do not receive proper oversight, training, and tasking in meeting requirements. [797-812]

167. FEDFIRE knowingly executes firefighting tactics during drills that they understand will not be executed during an actual fire response. This practice created false expectations of FEDFIRE's response capabilities by Ship's Force and SWRMC. Specifically, FEDFIRE's utilization of shipboard systems and hoses during drills is inconsistent with FEDFIRE's real-life practices for a shipboard fire response, which involves laying FEDFIRE's hose lines and securing an independent water source. [49, 50, 56, 832, 833, 838-840, 876-887, 1088]

168. FEDFIRE Metro leadership, to include (b) (6) and FEDFIRE Training Chiefs, was not aware of the full scope of FEDFIRE's training requirements and did not conduct oversight to check compliance with requirements. Training records were not organized or maintained in a manner that enabled leadership to monitor FEDFIRE personnel progress or completion. Prior to this investigation, FEDFIRE Metro leadership was largely unaware of CNIC's annual shipboard training requirements, and in many instances they did not assign shipboard training requirements to FEDFIRE Metro Area personnel who were expected to respond to a shipboard fire, which is contrary to CNIC requirements. For the four years preceding the fire, FEDFIRE Metro failed to meet CNIC's annual shipboard training requirements for the majority of their personnel. FEDFIRE Metro's Standard Operating Guide (SOG) for shipboard firefighting, dated October 2012, neither incorporates the requirements and concepts from CNIC N30's Headquarters Policy Directive (HPD) advisories nor the 8010 Manual, such as Individual Action Plans (IAP) for each class of ship. These deficiencies contributed to FEDFIRE's ineffective efforts in the initial hours of the fire on 12 July 2020. [845-870]

169. A major shipboard fire requires an integrated response by FEDFIRE, Ship's Force, mutual aid partners, and various other supporting entities. Contrary to OPNAVINST 11320.23G, FEDFIRE Metro's training does not "assure an integrated response in support of [S]hip's Force." FEDFIRE's shipboard trainer does not include any integrated training with Ship's Force. The

8010 Manual drills are the only consistent drills FEDFIRE exercised with Ship's Force, and FEDFIRE personnel at all levels, from CNRSW FEDFIRE down to junior firefighters, assessed that the 8010 Manual drills were not realistic or challenging. Most importantly, FEDFIRE personnel did not understand the integration requirement and never practiced executing it, which contributed to the uncoordinated firefighting efforts in the initial few hours of the fire. It was not until later that evening following several hours of coordination that FEDFIRE and Ship's Force began a truly integrated response effort, illustrating that repetition and training is required to develop this capability. [55, 60, 61, 152, 154, 173-179, 845-903, 906, 907, 914-921]

170. FEDFIRE Metro personnel did not uniformly understand the role of the ship's CO versus the FEDFIRE Incident Commander (IC) during an incident. While most senior FEDFIRE Metro personnel understood the ship's CO role over all firefighting efforts, many junior FEDFIRE Metro personnel viewed Ship's Force as acting in a supporting role to FEDFIRE. This inconsistent understanding contributed to an erroneous expectation that FEDFIRE would take charge and displace Ship's Force, which is how the November 2019 CHAMPION fire was approached and combatted. [834-844, 1088]

171. FEDFIRE Metro does not effectively coordinate with SWRMC to ensure FEDFIRE is supporting the various requirements pertaining to maintenance availabilities onboard NBSD. The minimal engagement between both entities in support of their common mission of shipboard fire prevention and response illustrates how both entities fail to appreciate their respective roles and responsibilities. Although tasked to support various 8010 Manual requirements, FEDFIRE was not aware of many of them nor did they execute those they did track. An overwhelming number of FEDFIRE personnel never participated in fire safety walkthroughs nor trained towards the SWRMC FRP. The totality of these deficiencies, along with FEDFIRE leadership having no knowledge about their shipboard walkthrough requirements contributed to an ineffective response during the initial hours on 12 July 2020. [847, 866-897, 1013, 1020]

172. Although there is some relevant shipboard firefighting training for FEDFIRE personnel in the Metro Area, to include ad hoc shipboard walkthroughs and FEDFIRE's shipboard trainer, the Metro Area does not maintain sufficient records of trainings aboard ships, which is contrary to CNIC's familiarization requirements. The insufficient recordkeeping by FEDFIRE Metro leadership prevented effective oversight of FEDFIRE personnel to ensure shipboard drills were effective and consistently executed. [866-897, 1020]

173. FEDFIRE Metro (b) (6) failed to ensure NBSD's MAA with SDFD was periodically reviewed and updated. OPNAVINST 11320.23G requires the cognizant F&ES Chief to facilitate periodic review of all MAAs every three years and update all MAAs at least every 10 years. The failure by FEDFIRE to comply with these requirements contributed to their lack of understanding to the capabilities and limitations of SDFD during the fire; specifically, FEDFIRE should have understood SDFD's policies limiting SDFD's ability to go fight a shipboard fire when there is no risk to life. This limitation should have been accounted for in FEDFIRE Metro's plans for shipboard fire response and practiced accordingly. [902-907, 1020]

174. FEDFIRE Metro Area leadership did not demonstrate knowledge of the full scope of the shipboard fire training requirements for its personnel. Additionally, FEDFIRE Metro Area does not have the right tools to track completion of its requirements. While numerous FEDFIRE Metro Area personnel stated that they are short-staffed, are unable to meet the mission, and they have too many competing demands, there is no basis to support this conclusion. FEDFIRE Metro Area has failed to identify and assess all of its daily requirements. Complicating this further, isolating the requirements for each installation to discern how best to accomplish them for the FEDFIRE personnel assigned to the Metro Area is difficult because the roles and responsibilities for the Metro Area not well defined. [223, 797-812, 845-870, 1020]

175 (b) (5) [redacted]

CNRSW

176. As the command responsible to ensure the accomplishment of NBSD's mission, CNRSW did not exercise sufficient oversight over NBSD and FEDFIRE's compliance with OPNAVINST 11320.23G and other related directives. CNRSW did not effectively manage the regional F&ES program by failing to evaluate the execution and effectiveness by the Region and installation teams along with their emergency response plans. Despite recognition of a complex command and control relationship between the FEDFIRE Metro Area, Region, and supported installations, there was no action or direction by CNRSW to correct the deficiencies. Additionally, CNRSW's failure to properly review and update MAAs, including the 1991 MAA with SDFD, was a significant breakdown in process and procedure. Contributing to this breakdown was an uncertainty of who owned the requirement to update the MAAs and if the responsibility resided with each installation or the Metro Area. Since the fire, CNRSW has taken steps towards updating MAAs, but the unclear delineation of roles and responsibilities between CNRSW and NBSD negatively impacted the NBSD CO's ability to carry out the installation's FEDFIRE responsibilities. [137, 864-866, 928, 996-1014]

177. CNRSW FEDFIRE (b) (6) [redacted] failed to exercise proper oversight over FEDFIRE Metro to ensure compliance with OPNAVINST 11320.23G and CNIC requirements for shipboard firefighting. Moreover, he demonstrated a lack of awareness and understanding of many of the shipboard firefighting requirements applicable to the Metro Area installations supporting Navy vessels. CNRSW FEDFIRE (b) (6) [redacted] likewise did not exercise appropriate oversight over FEDFIRE Metro's participation in 8010 Manual drills. He was not engaged in reviewing drill packages nor seeking feedback from drills. Despite previously

serving as the FEDFIRE Metro Area Chief, CNRSW FEDFIRE (b) (6) lacked an understanding and appreciation of the requirements for integrated shipboard firefighting. [859, 861, 863-866, 869, 870, 996-1014]

178. Contrary to the requirements of OPNAVINST 11320.23G, CNRSW FEDFIRE (b) (6) did not facilitate the development and periodic review of MAAs to promote efficiency and integration during a major shipboard fire. This failure to properly review and update the 1991 MAA with SDFD contributed to FEDFIRE and BONHOMME RICHARD's poor understanding of SDFD's policies and risk calculations. [141, 145, 936-948]

179. During the response, the Regional Operations Center (ROC) routed information up the chain of command, but was largely redundant with the EOC and at times took actions without direction or coordination with ESG-3. The ROC had no clear role in the incident. [132-136]

CNIC

180. CNIC failed to provide sufficient oversight to effectively communicate and ensure compliance with shipboard fire prevention and training requirements across CNIC commands. While CNIC N30 has published numerous "HPD Advisories" providing policy updates, such as shipboard training periodicity requirements, CNIC N30 failed to codify these advisories and requirements into standing CNIC instructions. CNIC N30 relies on the use of the Enterprise Safety Applications Management System (ESAMS) system to communicate and track training requirements for FEDFIRE personnel. This practice has resulted in an overall lack of understanding of training requirements by FEDFIRE, including a lack of awareness to many CNIC N30 training updates by the FEDFIRE Metro and CNRSW FEDFIRE Chief. Moreover, this directly contributed to the FEDFIRE Metro and CNRSW FEDFIRE Chief being largely unaware of the many updates and requirements contained in the CNIC N30 HPD advisories. [845-871, 900, 996-1016, 1034, 1185, 1186]

181. Contrary to OPNAVINST 11320.23G, CNIC N30 has not conducted a single program compliance assessment or site visit of CNRSW FEDFIRE since July 2012. This resulted in widespread complacency toward oversight and enforcement of FEDFIRE requirements. Unlike the rigorous oversight by CNIC to inspect force protection and associated training requirements of security personnel, CNIC N30 does not exercise the same level of vigilance for fire prevention training requirements. Moreover, CNIC has not adequately reviewed the Region SW Metro Area construct for FEDFIRE nor provided sufficient guidance to enable them to comply with requirements from OPNAVINST 11320.23G for consolidated departments. This contributed toward the lack of understanding of shipboard firefighting requirements, limited oversight practices, and the failure to review and update mutual aid agreements. [225, 226, 845-871, 890, 900, 1017, 1018, 1034, 1209]

182. While CNIC occasionally participates in RMC 8010 Manual Chapter 13 drills, CNIC N30 failed to provide appropriate oversight over the execution of 8010 Manual drills. This contributed to the lack of rigor with which FEDFIRE approaches shipboard fire training and

familiarization. To better ensure execution of the mission, CNIC N30 should recognize the distinct and shared responsibilities for shipboard fire prevention and response with their NAVSEA and CNRMC counterparts. [722, 723, 871, 900, 1025-1028]

183. CNIC has not provided implementation guidance to the Regions on the procedures and requirements of OPNAVINST 3440.18. CNIC failed to implement the requirements in this policy, acknowledging the instruction was confusing but did not initiate any proactive steps to correct the perceived deficiencies. CNIC N30 could not identify whether any training existed for installation or Region personnel to be aware of the instruction or execute the directives. This failure contributed to a widespread lack of awareness of the instruction and poor coordination of the fire response effort on 12 July 2020. [871, 900, 1015, 1021-1026, 1034]

184. The adequacy of FEDFIRE personnel's training to combat a shipboard fire is difficult to measure due to their lack of understanding of the requirements. FEDFIRE's shipboard firefighting training requirements were closely reviewed and modified based on the lessons learned from the MIAMI fire, and last disseminated in earnest in 2016. Because the requirements from these lessons were never fully memorialized in written policy, the FEDFIRE Metro Area personnel have been largely unaware of these requirements. Although it is clear that FEDFIRE Metro Area personnel are not completing the annual shipboard firefighting training requirements, it is unknown whether the requirements are of sufficient quantity and quality to prepare the personnel that may respond to a future shipboard fire. [842-867, 871, 900, 998-1006, 1034, 1177, 1186]

185. (b) (5)

D. Navy Guidance and Policies for Fire Prevention and Incident Response

8010 Manual

186. The 8010 Manual does not provide sufficient clarity for the various stakeholders that rely on this document to understand their roles and responsibilities. Of note, paragraph 1.2.3 does not make the 8010 Manual requirements clearly applicable to private shipyard maintenance availabilities when they are not invoked by contract. [626, 689-692, 759, 760, 767, 773-777, 1108-1150]

187. Implementation of the 8010 Manual is incomplete for contracted availabilities. NAVSEA applies portions of the 8010 Manual through NSIs for private shipyards without providing additional guidance regarding RMC and Ship's Force responsibilities and contributing to inconsistent application between the public and private shipyards. The explanation for these deviations varies, but appear to be driven mostly by unexplored cost concerns. [626, 689-692, 759, 760, 767, 773-777, 1108-1150, 1125]

188. The structure of the 8010 Manual lacks an enforcement mechanism for 8010 Manual requirements at the RMCs. NAVSEA's failure to fully invoke the requirements for private yards and paragraph 1.2.3's applicability framework create an ineffective enforcement structure towards the shipyard. Furthermore, in paragraph 1.2.4, the 8010 Manual makes its application to Ship's Force potentially dependent on SRCA invocation. This, combined with the structure of the FSC, confusion over the term SRCA, and the lack of technical manual ownership at NAVSEA resulted in ineffective oversight of technical requirement implementation at the RMCs. [768, 773, 776, 1108-1150]

189. Assignment of the SRCA as a responsible organization for fire safety has generated confusion and uneven implementation of the 8010 Manual, especially for availabilities executed at private shipyards. While the owners of the technical manual (NAVSEA 04) understand the term SRCA to apply to the LMA and clearly define SRCA as the LMA in the 8010 Manual, associated SRCA requirements are not completely invoked by the RMCs upon the private shipyards while other requirements are assumed by the RMC. [671, 672, 1136, 1139]

190. The 8010 Manual command and control construct does not address all circumstances that would require incident management, to include when a private shipyard SRCA is conducting an availability on a Navy installation. For a ship availability being executed by a private shipyard on a Naval base, the 8010 Manual does not provide clear direction regarding how incident response should be managed. Moreover, because the 8010 Manual was not updated to take into account OPNAVINST 3440.18, there are inconsistencies that impede full implementation. For the BONHOMME RICHARD fire, this defect in the manual contributed to the lack of clear guidance and common understanding of roles and responsibilities during the response. [228-243, 708-712, 1187-1213]

191. The current 8010 Manual framework governing FSCs allows junior officers and civilians to waive fire safety requirements. There is no requirement or forcing function to ensure that these decisions be raised to a higher level, either for approval or visibility. This vests a less experienced group with the authority to execute risk-based decisions regarding the fire safety posture of national assets. Additionally, because FSC members come from organizations with schedule pressures, they are compelled to rationalize fire safety relaxations for cost or schedule gains, and not critically assess potential fire safety risks. By allowing individuals focused on the completion of a single availability to approve deviations associated with fire risk, decisions rely on a perception that probability of a catastrophic event is low for that availability instead of aggregating the probability of a catastrophic event over many availabilities. [451, 453, 456, 460, 694, 699, 707]

192. Lack of clear OPNAV guidance on applicability and enforcement of the 8010 Manual requirements to the CNIC community has resulted in a lack of CNIC accountability and ownership of 8010 Manual requirements. The 8010 Manual sets CNIC requirements in the absence of any explicit authority for NAVSEA to task CNIC entities. CNRSW FEDFIRE leadership views the 8010 Manual as a "ship requirement" that FEDFIRE supports when able. FEDFIRE leadership assessed they could not realistically support the required periodicity of the 8010 Manual's drill requirements, and in some instances, FEDFIRE simulates participation. Yet FEDFIRE leadership nonetheless assesses FEDFIRE has been meeting the intent of the 8010 Manual drills. NBSD leadership likewise does not drive FEDFIRE's participation in 8010 Manual drills and views FEDFIRE's participation in 8010 Manual drills as falling under CNRSW. [882, 1009, 1011, 1108]

193. (b) (5)

194. The 8010 Manual's construct, in which the SRCA's FRP is intended to articulate a specific hose team integration strategy between Ship's Force, F&ES, and mutual aid, is ineffective to ensure all parties train to and execute an effective integrated response. Paragraph 3.2.5 of the 8010 Manual states that the FRP "shall address the specific strategy of establishing integrated hose teams of [Ship's Force], F&ES, and mutual aid personnel early in the incident to ensure the most effective response." This paragraph goes further to state, "[t]he FRP shall address a hose team relief process to keep hoses staffed." SRCAs have no authority to direct FEDFIRE response practices, and coordination between FEDFIRE and SWRMC has not addressed specific hose team integration issues. [708, 842, 1013]

NSTM 555

195. NSTM 555 does not adequately account for firefighting in Landing Helicopter Deck (LHD) class amphibious assault ship vehicle spaces. The lack of available bulkhead boundaries, the number of large open spaces, and the unique ventilation systems all present a firefighting challenge differing from other ship spaces. The NAVSEA Failure Review Board (FRB) addresses several of these issues in depth. [4-213, 1156]

196. NSTM 555 does not contemplate fighting an out-of-control fire that forces ship evacuation. There is a widespread acceptance throughout the Navy that for ships at sea, evacuation during a fire is not a viable option; however, the standard for fighting a fire while the ship is pierside is undefined. Given the recent prevalence of pierside fires, the expected standard if or when Ship's Force evacuates the ship should be clearly addressed. [4-213, 1156]

OPNAVINST 3440.18

197. OPNAVINST 3440.18 replaces the standard all-hazard incident response terminology with terms such as "primary commander" and "area commander," which unnecessarily creates divergent frameworks for responding to a major shipboard fire. As written, it is unclear how these two policies co-exist during a major shipboard casualty that also threatens the installation. OPNAVINST 3440.18 was unknown to Ship's Force, FEDFIRE, NBSD, SWRMC, and CNRSW leadership prior to the fire and was not implemented or incorporated into shipboard drills. OPNAVINST 3440.18 is not aligned with Department of Defense (DoD) EM policy, as it fails to incorporate NIMS/Incident Command System (ICS) processes and command and control structure, even though the instruction applies to all-hazard incidents. As such, OPNAVINST 3440.18 is not consistent with the NIMS/ICS standard processes and procedures supporting entities (such as the EOC, the ROC, and external federal agencies) are trained to follow during a major casualty. Similarly, OPNAVINST 3440.18 does not clearly identify the roles of external federal agencies, such as the United States Coast Guard and other federal agencies, during a major shipboard casualty. Finally, OPNAVINST 3440.18 does not establish clear drilling requirements specific to the instruction and does not specify whether 8010 Manual drills satisfy the OPNAVINST 3440.18 requirement. The lack of any implementation of OPNAVINST 3440.18 throughout the Navy, including lack of training by CNIC as required by the instruction, contributed to these ambiguities. [239, 1024, 1192, 1198, 1199, 1201-1203, 1206, 1207, 1208, 1210-1213]

OPNAVINST 11320.23G

198. OPNAVINST 11320.23G provides general guidance related to FEDFIRE at all levels, but relies on further direction to be developed by CNIC to be effective. OPNAVINST 11320.23G does not clearly define shipboard training requirements or the requirements for pre-incident plans for shipboard fires. Moreover, the instruction has not been updated to fully incorporate the fire prevention and response policies contained in the 8010 Manual or the lessons learned from more

recent shipboard fires. CNIC N30 relies on "HPD Advisories" to elaborate on specific training requirements, but these advisories are informally distributed and not codified. As a result, FEDFIRE personnel through the Metro Area were unaware of the requirements for shipboard training, drills, and familiarization tours. Moreover, CNRSW FEDFIRE leadership was unaware how these requirements were satisfied. There is likewise no common understanding of the requirements for pre-incident plans for shipboard fire response. The FEDFIRE Metro Chief, the CNRSW FEDFIRE Chief, and the FEDFIRE Metro Assistant Training Chief could not articulate the required number of shipboard training hours and failed to consistently define and explain the training requirements from OPNAVINST 11320.23G. Neither CNIC nor CNRSW has effectively provided implementing guidance to clarify the specific requirements that would satisfy OPNAVINST 11320.23G. This has contributed to many of the challenges with the F&ES program in CNRSW. [821, 847, 855-865, 870-874, 998-1005, 1008]

JFMM

199. COMUSFLTFORCOMINST 4790.3, the primary document used to conduct fleet maintenance, does not adequately incorporate or refer to the 8010 Manual requirements. Closer alignment of COMUSFLTFORCOMINST 4790.3, the 8010 Manual, and NSI will close any reference "gap" between established guidance and eliminate ambiguity on the part of stakeholder organizations. Although COMUSFLTFORCOMINST 4790.3 contains a general statement acknowledging that COMUSFLTFORCOMINST 4790.3 is not the definitive reference for shipboard maintenance availabilities nor is it a technical authority, COMUSFLTFORCOMINST 4790.3 does not adequately address the numerous instructions or guidance which may supersede the COMUSFLTFORCOMINST 4790.3 requirements. The NAVSEA 8010-defined FSC has the implied authority to waive almost any requirement, including COMUSFLTFORCOMINST 4790.3 requirements, during an availability. [336, 462-467, 1117]

SFTRM

200. The COMNAVSURFPACINST/COMNAVSURFLANTIST 3502.7A framework permits a crew to be in the lowest state of DC readiness during the maintenance phase in the OFRP cycle when the ship is most vulnerable to a fire. COMNAVSURFPACINST / COMNAVSURFLANTIST 3502.7A does not trigger action when a ship's Optimized Fleet Response Plan FRP cycle extends beyond 36 months, as was the case for BONHOMME RICHARD. COMNAVSURFPACINST/COMNAVSURFLANTIST 3502.7A' only mechanism for evaluation of a ship's DC readiness in an availability is Readiness Evaluation Three (READ E-3). There are no action items or follow-up created for stakeholders outside of Ship's Force during the READ E-3 process, regardless of how degraded the ship's DC posture is assessed. [489, 506]

Executive Agent for Damage Control

201. The processes developed around the DC Executive Agent (EA) role did not ensure longevity of the organization, and large parts of the initial charter have atrophied in the years since the MIAMI fire. The MIAMI Fire Review Panel recommended: "[t]here is no single organization accountable for implementing Navy-wide recommendations from fire-related mishaps and lessons learned." USFF, an EA for DC, was intended to carry out this role, but it relies on the Damage Control Board of Directors (DCBOD) to fulfill this role and responsibility. Previously, there were action-level working groups with subject matter experts, but these have ceased to regularly meet. This construct stood-up as an after action item from the MIAMI close-out endorsement from Chief of Naval Operations (CNO) Jonathan Greenert and has not been further defined nor revisited since. In the years immediately after creation, the DCBOD was meeting quarterly. At the time of the BONHOMME RICHARD fire, no DCBOD meetings had occurred since December 2019. A SUBFOR review of fire safety implied that the DCBOD is insufficiently active and has minimal input into DC improvements, and a composition of senior leaders is required in order to effectively and holistically address DC issues across the Navy. [1091-1107]

202. While reactive in nature, the reviews conducted by the DCBOD into DC events identified areas which, if corrected, would have mitigated issues aboard BONHOMME RICHARD. The fires aboard MIAMI, USS GUNSTON HALL (LSD-44), and USS OSCAR AUSTIN (DDG-79) all demonstrated the challenges associated with improperly run temporary services. Damage during the OSCAR AUSTIN fire was limited due to the effective use of boundary cooling, despite challenges during the response that was characterized as disorganized and not following the IET watchbill. Both the GUNSTON HALL and OSCAR AUSTIN fire investigations identified lack of adequate Ship's Force training regarding response to industrial fires. If meaningful action and dissemination of lessons learned had resulted from the issues identified by the DCBOD, they could have impacted similar weaknesses that were causal to the magnitude of the fire on BONHOMME RICHARD. [1080-1082, 1095-1102]

203. The DCBOD is not accomplishing its charter to review all mishaps because USFF is not receiving all command investigations and has to request relevant fire investigations. Several shipboard fire command investigations, including CHAMPION, USS IWO JIMA (LHD-7), USS DEVASTATOR (MCM-6), and USS BOXER (LHD-4) have not been reviewed by the DCBOD. Specifically, the CHAMPION fire in November 2019, which included a loss of power and evacuation of the ship before FEDFIRE reengaged the fire from the pier, shared many common traits to the fire aboard BONHOMME RICHARD. Likewise, also in November 2019, IWO JIMA was in an availability when a fire broke out and Sailors did not enter spaces when Naval Firefighting Thermal Imagers (NFTI) whited-out. The lack of timely review of these reports prevented dissemination of valuable and relevant lessons learned. [1084-1089, 1094, 1103-1107]

204. The effectiveness of the DCBOD has diminished because the DCBOD has allowed organizations to close actions items before full completion. CNSP closed out OSCAR AUSTIN fire actions related to duty section size and composition as well as DC readiness during an industrial environment. However, the associated actions have still not been completed more than 12 months since the DCBOD marked items as complete. If these action items were fully addressed by CNSP, and in light of the parallels between the OSCAR AUSTIN and BONHOMME RICHARD, it may have helped prevent this incident. The DCBOD has not scrutinized closeout actions to ensure they are complete and address the root causes identified by the board. Contributing to this, there is a single USFF contractor tasked with coordinating the DCBOD, but no one is otherwise vested with the sole responsibility of ensuring needed DC changes are driven to completion. [1096-1102]

205. The inaction by the DCBOD following a NAVSEA report showing more than 300 shipboard fires within the previous two years demonstrated a missed opportunity to effect positive change in early 2020. At a minimum, the DCBOD should have scheduled a meeting to review the findings and assign actions. [1099-1104]

Command and Control for Major Shipboard Casualty

206. Policy on command and control for a major shipboard fire requiring an integrated response is disseminated throughout multiple instructions, manuals, and local Standard Operating Procedures (SOPs) and is not consistently defined or trained. OPNAVINST 3440.17A, OPNAVINST 3440.18, OPNAVINST 11320.23G, the 8010 Manual, SWRMC's FRP, and FEDFIRE's SOG 176 all provide applicable guidance on command and control, but roles and responsibilities of key entities are not consistently addressed or defined. While responsible entities (SWRMC, NBSD, and FEDFIRE) should have exercised more leadership in resolving any unclear or inconsistent requirements, the lack of clear and consistent Navy guidance injected confusion regarding the respective roles of FEDFIRE, the BONHOMME RICHARD CO, NBSD CO, SWRMC CO, and other responsible entities on 12 July 2020. [228-243]

207. FEDFIRE and EM responders train to NIMS, which is not clearly aligned with the command and control constructs provided in the 8010 Manual and OPNAVINST 3440.18. OPNAVINST 11320.23G defines FEDFIRE's Incident Commander role as distinct from the 8010 Manual and OPNAVINST 3440.18. [834-844]

Uniforms

208. BONHOMME RICHARD's crew was under the incorrect impression that Type III Navy Working Uniforms (NWU) could not be worn under Firefighting Ensembles (FFE) during a fire response, which can be attributed to poor training practices by Ship's Force and inconsistent guidance in the fleet. This, coupled with the ship's allowance for NWUs to be worn by some duty section members partially contributed to several senior personnel in the 12 July 2020 duty section not joining firefighting efforts. [25]

Section III: Opinions on other aspects of the incident and response

A. Medical Response

209. The medical response and triage efforts of the USS BONHOMME RICHARD (LHD-6) medical department were effective. The medical department personnel quickly established a triage station at the pier and continued providing medical support to injured personnel, coordinating medical evacuations as well as emergent care despite triage being relocated multiple times due to explosions and the projected blast radius for potential future explosions. The medical department appropriately communicated and maintained an adequate duty section rotation throughout the incident, which contributed to preventing the loss of life and preserving the wellbeing of all first responders. [1055-1070]

B. COVID-19 Impacts

210. Coronavirus Disease-2019 (COVID-19) did not hinder or adversely impact firefighting efforts throughout the fire response aboard BONHOMME RICHARD. [5-213, 586-591]

211. Since the start of BONHOMME RICHARD's availability, the execution of 8010 Manual drills was substandard. While COVID-19 exacerbated the efficacy of 8010 Manual drills, Ship's Force had been on a downward trajectory in maintaining proficiency and training standards. Although COVID-19 contributed to some delays in meeting certain drill requirements, Ship's Force was failing to conduct drills in a timely manner prior to March 2020. When Naval Base San Diego (NBSD) communicated the cessation of all drills as a COVID-19 mitigation, which incorrectly included 8010 Manual drills, this interruption had minimal effect because of preexisting challenges and lapses in drill completion. [478-503]

212. Actions to temporarily halt all 8010 Manual drills as a result of COVID-19 should have been accompanied with actions to mitigate the resulting readiness risk and ensure the requisite level of integration training was still performed. However, the incorrect cessation of drills was unknown by Commander, Navy Region Maintenance Center (CNRMC) leadership and was not directed by Commander, Navy Installation Command (CNIC). Southwest Regional Maintenance Center (SWRMC) erroneously assumed 8010 Manual drills were cancelled based on guidance distributed by NBSD regarding Anti-Terrorism Force Protection (ATFP). Although the applicable COVID-19 guidance did not completely prohibit continued 8010 Manual drills, SWRMC announced an indefinite hold on all training and drills, including 8010 Manual drills without mitigation. Because 8010 Manual requirements are set by Naval Sea Systems Command (NAVSEA), SWRMC should have consulted with CNRMC instead of relying upon guidance from NBSD. [478-503]

213. While COVID-19 resulted in the final delay of BONHOMME RICHARD's 8010 Manual Chapter 12 +360 drill, this drill had been overdue since November 2019 and COVID-19 was not the cause of the deferral. The inability to perform an overdue drill that was not attributable to

COVID-19 was a failure of the Fire Safety Council (FSC) and SWRMC to meet 8010 Manual drill requirements. [492-503]

214. Though COVID-19 social distancing measures limited some aspects of Federal Firefighting Department (FEDFIRE) training (such as reduced cross-training across different stations), FEDFIRE's shipboard firefighting training had been deficient prior to COVID-19. Additionally, COVID-19 did not significantly impact FEDFIRE's ability to fight the BONHOMME RICHARD fire. [213, 845-870, 898]

215. While COVID-19 social distancing measures changed some shipboard practices, BONHOMME RICHARD had been conducting ineffective training prior to March 2020. Ship's Force had established a consistent practice of not requiring Self-Contained Breathing Apparatus (SCBA) or Firefighting Ensemble (FFE) dress-out during duty section training and drills as early as 2019, further demonstrating COVID-19 did not have a significant impact on shipboard practices. [517-534]

216. Commander, Naval Surface Force Pacific Fleet (CNSP) emphasized to BONHOMME RICHARD that COVID-19 spread should be one of the highest priorities of the ship, prompting the ship's Commanding Officer (CO) to emphasize social distancing and COVID-19 prevention efforts were mission essential. Although BONHOMME RICHARD implemented additional mitigation measures following this direction, none of these measures had a significant impact to the readiness of the crew. [517-534, 567, 568]

217. In the months preceding the fire, a few key personnel from BONHOMME RICHARD, SWRMC, and other entities supporting the availability were restricted from accessing the ship due to risk factors associated with COVID-19. Although these absences were for a significant period prior to the fire, they did not substantively change the fire posture or readiness of BONHOMME RICHARD. [454, 633]

C. Helicopter Operations

218. Helicopter water drops had some positive impact in combatting the casualty by enabling water to permeate into the ship and temporarily decreasing superstructure temperatures. However, these water drops required significant amounts of coordination on the ground to prevent injury and periodically disrupted internal firefighting efforts. Various personnel involved in firefighting efforts on the ground shared their impressions on the efficacy of these drops, and their opinions varied. The helicopter crews conducting the drops were exposed to some risk during these operations and were largely untrained in this particular technique. Based on the outcome of this fire coupled with personnel accounts from the scene, it is difficult to assess the efficacy of these drops and whether the capability should be developed for future incidents. [165-183]

D. Fleet Damage Control Training

219. Fleet Damage Control (DC) training provides training for combatting an at-sea shipboard casualty; however, current fleet DC curricula does not include adequate courses of instruction for firefighting in an industrial environment. There are no Navy courses tailored to the execution of 8010 Manual requirements, including training on quick-disconnects and training on conducting an integrated firefighting response with FEDFIRE and mutual aid partners. With limited exceptions, the only industrial firefighting training required is that which occurs during 8010 Manual drills, and as well as training provided by the Ship Repair and/or Construction Activities (SRCA) in accordance with the 8010 Manual. The lack of knowledge of the 8010 Manual by BONHOMME RICHARD's DC leadership and triad, and the lack of BONHOMME RICHARD crew's knowledge on quick-disconnects and setting boundaries in an industrial environment reflect that current fleet training requirements did not adequately prepare BONHOMME RICHARD to combat the fire on 12 July 2020. [1157-1175]

E. Summary of Performance by Organizations Involved

220. Office of the Chief of Naval Operations (OPNAV). Under the authority, direction, and control of the Secretary of the Navy (SECNAV) and Chief of Naval Operations (CNO), OPNAV is responsible for establishing policies, providing sufficient resources, and ensuring combat-ready naval forces to enhance U.S. maritime capabilities. OPNAV is also responsible for establishing Navy strategy and policy, issuing guidance, and aligning actions of Navy organizations. Consistent with this responsibility, OPNAV published OPNAVINST 3440.18 for combatting major shipboard non-nuclear casualties. Although this policy was largely unknown throughout the fleet prior to the BONHOMME RICHARD fire, OPNAV executed its requirements and responsibilities. [691, 692, 1187-1213]

221. Commander, United States Pacific Fleet (PACFLT). Responsible to the CNO and Commander, U.S. Indo-Pacific Command, the PACFLT mission is to advance Indo-Pacific regional maritime security and enhance stability. As the Primary Commander for major shipboard non-nuclear casualties in the PACFLT Area of Responsibility (AOR) in accordance with OPNAVINST 3440.18, PACFLT is responsible for oversight of the unified area command (NBSD and SWRMC) and the custodial command (BONHOMME RICHARD) for emergency response planning and execution of major shipboard non-nuclear casualties within its designated area (to include Pacific Ocean ports in the U.S). Prior to December 2020, PACFLT did not take actions to implement the requirements of OPNAVINST 3440.18. Notwithstanding this issue, Commander, PACFLT executed his requirements and responsibilities. [651-668]

222. Commander, United States Fleet Forces Command (USFF). Responsible to the CNO and two combatant commanders, the USFF mission is to train, certify, and provide combat-ready forces, plan and execute assigned functions, and provide operational support and execute joint missions. As the EA for DC, USFF is responsible for overseeing and carrying out implementation of the MIAMI Fire Review Panel's recommendations for fire prevention and

response. USFF did not effectively execute these responsibilities. Additionally, prior to December 2020, USFF did not take actions to implement the requirements of OPNAVINST 3440.18. Notwithstanding these two issues, Commander, USFF executed his requirements and responsibilities. [1091-1107]

223. Naval Education and Training Command (NETC). Responsible to the CNO, the NETC mission is to recruit and train those who serve, transforming them into combat-ready warfighters and providing them the tools and opportunities for continuous learning and development. NETC executed its requirements and responsibilities. [1158-1175]

224. Naval Sea Systems Command (NAVSEA). Responsible to the CNO, the NAVSEA mission is to design, build, deliver and maintain ships and systems on-time and on-budget. As commander over CNRMC and SWRMC, NAVSEA was responsible for the oversight and execution of those subordinates and their mission. Although these subordinate commands did not properly carry out BONHOMME RICHARD's availability, NAVSEA executed its requirements and responsibilities. [773-795]

225. Commander, U.S. THIRD FLEET (C3F). Responsible to PACFLT, the C3F mission is to plan and execute naval operations in the Pacific Ocean, provide maritime homeland defense, regional security, and humanitarian operations support through integrated naval forces acting as a single Sea Service. As commander over ESG-3 and PHIBRON-5, C3F satisfactorily executed his requirements and responsibilities. [649]

226. Commander, Naval Surface Force Pacific Fleet (CNSP). Responsible to PACFLT, the CNSP mission is to deliver and sustain full-spectrum naval power and lead Surface Warfare policy and standardization issues with a fleet-focused perspective. As the Type Commander (TYCOM) and Administrative Control (ADCON) Immediate Superior in Command (ISIC) for BONHOMME RICHARD, CNSP was responsible for various man, train, and equip functions which directly impacted BONHOMME RICHARD's material condition, the conduct of the availability, and the crew's readiness to combat a fire. CNSP did not provide satisfactory oversight over BONHOMME RICHARD's man, train, and equip functions. [593-600, 614-639]

227. Commander Naval Air Force, United States Pacific Fleet (CNAP). Responsible to PACFLT, the CNAP mission is to man, train, and equip deployable, combat-ready Naval Aviation forces that win in combat. CNAP executed his requirements and responsibilities. [165-172]

228. Commander, Navy Installation Command (CNIC). Responsible to the CNO, the CNIC mission is to deliver effective and efficient readiness from the shore. Through CNIC N30, CNIC failed to fulfill its responsibilities for oversight and execution of FEDFIRE at the regional and installation level. Additionally, CNIC did not take sufficient action to implement the requirements of OPNAVINST 3440.18. Notwithstanding these two issues, CNIC satisfactorily executed his requirements and responsibilities. [1016-1038]

229. Expeditionary Strike Group THREE (ESG-3). Responsible to C3F, the ESG-3 mission is to provide amphibious expertise and a deployable staff for combat and contingency operations. ESG-3 did not have specifically delineated responsibilities for BONHOMME RICHARD's fire response, but assumed a leadership role during the incident. ESG-3 provided appropriate leadership and direction during the incident and as the operational commander of the ship. ESG-3 did not have official ADCON responsibilities to the BONHOMME RICHARD. ESG-3 adequately performed all responsibilities for BONHOMME RICHARD. [640-649]

230. Commander, Navy Region Southwest (CNRSW). Responsible to CNIC, CNRSW's mission is to efficiently deliver the right level of shore support services that meet its customer's mission requirements, reduces risk, and ensures Navy Operational Forces are ready to take the fight to the enemy. As the naval shore installation management headquarters for the southwest region (California, Arizona, Nevada, Utah, Colorado, and New Mexico), Navy Region Southwest provides coordination of base operating support functions for operating forces throughout the region. As the commander responsible for providing oversight of NBSD's Emergency Management (EM) and Fire and Emergency Services (F&ES) programs, CNRSW failed to provide adequate oversight to ensure NBSD and its F&ES program were adequately prepared and trained to execute an integrated response to a major shipboard fire. [987-1014]

231. Commander, Navy Region Maintenance Center (CNRMC). Responsible to NAVSEA, CNRMC's mission is to oversee the Navy's four Regional Maintenance Centers (RMC) and two detachment sites in their execution of surface ship maintenance and modernization. The command is responsible for coordinating depot and intermediate-level maintenance of the Navy's surface fleet, and for resourcing the many requirements necessary to meet the schedule of ship availabilities that keep the Navy's warships materially ready. As the immediate commander for SWRMC, CNRMC failed to exercise adequate oversight over SWRMC's execution of the BONHOMME RICHARD maintenance availability, as well as SWRMC's execution of 8010 Manual requirements. [751-771]

232. Commander, Amphibious Squadron FIVE (PHIBRON-5). Responsible to ESG-3, PHIBRON-5's mission is to prepare and direct expeditionary warfare missions in support of national objectives by employing the combat power of amphibious ships and the U.S. Marine Corps (USMC) in the maritime, littoral, and inland environments. PHIBRON-5 did not have specifically delineated responsibilities for the BONHOMME RICHARD availability as a subordinate organization under CNSP. PHIBRON-5 satisfactorily executed his responsibilities. [592-613]

233. Southwest Regional Maintenance Center (SWRMC). Responsible to CNRMC, the SWRMC mission is to provide a "one stop shop" maintenance philosophy which includes planning, execution, and close out of maintenance actions." As the Lead Maintenance Activity (LMA) and Ship Repair and/or Construction Activities (SRCA) for the BONHOMME RICHARD availability, SWRMC was responsible for oversight and completion of all maintenance. SWRMC failed to fulfill these responsibilities. [669-750]

234. Naval Base San Diego (NBSD). Responsible to CNRSW, NBSD's mission is to support the operations of all tenant commands onboard the installation. NBSD failed to fulfill the responsibilities managing and overseeing NBSD's EM and F&ES programs, specifically in regard to preparation and training for execution of an integrated response to a major shipboard fire by F&ES, Ship's Force, mutual aid partners, and SWRMC. [923-986]

235. Federal Fire Department (FEDFIRE). Responsible to all Navy installations in the San Diego metro area and the CNRSW FEDFIRE Chief, FEDFIRE's mission is to protect the lives and property of those that defend America, through fire suppression, emergency medical response, hazardous materials and radiological response, fire prevention, and public education. FEDFIRE did not meet requirements for effectively integrating with Ship's Force and San Diego Fire Department (SDFD) during the fire. FEDFIRE also failed to meet CNIC and OPNAV proficiency requirements for integrated shipboard training. [797-922]

236. Helicopter Sea Combat Squadron THREE (HSC-3). Responsible to CNAF, HSC-3's mission is primarily employ the versatility of the MH-60S aircraft to support the strike group commanders and any other emergent tasking. HSC-3 did not have specifically delineated responsibilities for BONHOMME RICHARD's availability or the fire response. When tasked by COMNAVAIRPAC to conduct helicopter drops to firefighting efforts, HSC-3 met expectations for support. [165-172]

237. General Dynamics National Steel and Shipbuilding Company (NASSCO). NASSCO generally performed services consistent with the terms of the maintenance contract but did not follow all NAVSEA Standard Items contractually required. Specifically, NASSCO did not provide a portable diesel generator to BONHOMME RICHARD after the ship's emergency diesel generators were unavailable. NASSCO also failed to maintain an updated Temporary Service Diagram identifying the locations of quick disconnect fittings, all of which contributed to a degraded fire posture of on BONHOMME RICHARD. [244, 251, 288-291, 358, 470-472, 478]

F. Miscellaneous

238. Unless all stakeholder organizations effect meaningful, long-lasting change to fire safety, it is likely the Navy will lose another ship to a fire in a similar fashion. While the JAGINST 5800.7G requires rendering an opinion on this subject, the urgency for long-lasting change to fire safety posture cannot be understated. Organizations at all echelons must evaluate whether they are meeting the letter and intent of existing requirements to ensure units are prepared for this threat. [1052, 1053, 1071-1226]

239. Shipboard fires have done significant damage to Navy ships in the last decade, many occurring during availabilities. The aggregate probability of these events is high and currently represents significant risk to the fleet. The Navy has failed to track fire incidents and near misses in a way that could effectively shape policy. The ability to prevent major fires is an important

strategic enabler to maintaining the world's premier Navy as other countries face similar risks in construction and maintenance of ships. [1050, 1051, 1071-1090]

240. The considerable similarities between the fire on USS BONHOMME RICHARD (LHD-6) and the USS MIAMI (SSN-755) fire of eight years prior are not the result of the wrong lessons being identified in 2012, it is the result of failing to rigorously implement the policy changes designed to preclude recurrence. The confusion that occurred during the MIAMI fire in the execution of an integrated response between Sailors and Federal Firefighting Department (FEDFIRE) recurred on BONHOMME RICHARD. This recurrence was the cumulative result of organizations, to include Commander, Navy Installation Command (CNIC), Naval Sea Systems Command (NAVSEA), and CNSF, failing to place emphasis and rigor on integrated planning and training prior to a fire. The challenges across the ship were identified on MIAMI and have recurred due a failure to comply with the 8010 Manual and NAVSEA Standard Items (NSI) policy in fires on USS GUNSTON HALL (LSD-44), USS OSCAR AUSTIN (DDG-79), and USS IWO JIMA (LHD-7) and BONHOMME RICHARD. The requirements developed by the MIAMI Fire Response Panel were, in most cases, codified for the organizations with fire safety roles for ships in availabilities. The empowered leaders in these organizations must validate and uphold these requirements and not subordinate them to cost and schedule. [1071-1213]

241. There is individual risk associated with combating a large fire, and the risk calculus of the different organizations that participated throughout this fire varied based on organizational policy. The decision space afforded to the uniform Commanding Officer (CO) over his or her Sailors is considerably larger than that of San Diego Fire Department (SDFD) or FEDFIRE over their personnel. Therefore, it is incumbent upon all uniform COs to understand and be prepared to manage these differences. The expectations placed upon uniform COs, which are absolute and commensurate with their duties and responsibilities, may be incompatible with risk decisions considered normal policy for civilian responders. More directly, to enable mission success and meet their assigned duties, uniform COs must be prepared to press forward with firefighting efforts even when civilian counterparts deem the risk to be untenable. [47-145]

242. In leading firefighting efforts from the pier, The BONHOMME RICHARD CO, CAPT Gregory Thoroman, ordered an evacuation early on in the incident due to accumulating smoke and heat. The low risk tolerance early on in the fight to enter the ship had a notable impact on the outcome of the event. As the day went on, the BONHOMME RICHARD CO displayed a higher willingness to take risk. By the time Sailors were re-entering, the ship was functionally lost. Had the CO or his assigned representative directed more action early in the fire, it would have likely changed the outcome. Determining the appropriate level of risk acceptance in the heat of battle is one of the most difficult tasks for commanders, which is why the Navy invests so much capital in our leaders — enabling them to perform during critical moments and without notice. Managing risk decisions that may result in loss of life while moored on a naval installation fighting a fire may require a different calculus than at-sea, but the expectation for the CO never changes — they must always be ready and ensure the same of their crew — to execute

their duty to protect and limit damage to both ship and crew. No one perished or was seriously injured, yet the ship was lost despite the morning window of time when taking more risk may have saved the ship. Given the significant long-term impact of losing this capital asset, warfighters must examine these hard questions to better prepare for future emergencies. [4-213, 1050, 1051]

Chapter 4 – Recommendations

The investigation team is very aware that adding requirements does not necessarily solve problems, and that a consistent trend over the last two decades has been more instructions following a major incident. Part of the issues identified in this investigation is that requirements frequently change based on narrow considerations tailored to individual action items; however, these shifting requirements fail to account for the cumulative effect of disparate higher headquarters responses. In turn, this practice leaves the warfighter consistently behind in understanding and fulfilling these shifting requirements and creates opportunity for unmitigated risk to propagate as execution lags behind policy changes.

The Navy has created requirements that have not been followed or verified as effective by their owners, and many personnel within the Fleet lacked awareness to their existence as seen in this investigation. Crafting requirements without effective follow-through creates the illusion of fixing a problem, giving false comfort that the same problem would not recur. While this report identifies changes to doctrine and practices, these recommendations were crafted to extend the cognizant organizations decision space on implementing a way forward. If only new requirements are created after all lessons learned from this incident are addressed, without reforming or removing other failing policies, then fire risk will not be properly addressed at the unit level.

To enable effective follow-on actions and delineate clear ownership of tasks and responsibilities, these recommendations are structured by organization. However, consistent with the findings and opinions in this report, the recommendations were identified in relation to the four key focus areas that drove the final outcome to the BONHOMME RICHARD: (1) Material Condition; (2) Training and Readiness; (3) Shore Establishment Support; and (4) Oversight. At the end of every recommendation, they are linked to each of the four focus areas that are most relevant.

Some of the below organizations have taken steps to address several of these recommendations since the fire on 12 July 2020 but are still included to ensure a complete report and satisfy the requirement in our convening order. Regardless of which recommendations are ultimately adopted, the Navy must align, streamline, and simplify all associated directives, policies, and programs. Responsibility and authority must be clearly codified and appropriate training and procedures established to prevent a similar outcome.

A. SECNAV

1. Review research, development, acquisition, and sustainment (including maintenance) resourcing and priorities to consider whether fire risk is adequately supported across the Navy's programs based on the lessons of this report. [Shore Establishment Support; Oversight]

B. OPNAV

2. Evaluate whether the schedule pressures inherent in ship maintenance efforts inhibit the ability of the maintenance community to effectively carry out fire safety oversight and whether Secretariat involvement could insulate personnel involved with fire safety on the waterfront from these pressures. [Shore Establishment Support; Oversight]

3. Evaluate OPNAVINST 3440.18 to clarify applicability and ensure consistency of incident response procedures with National Incident Management System (NIMS), IMS, DoDI 6055.17, OPNAVINST 3340.17A, and the 8010 Manual. Additionally, evaluate OPNAVINST 3440.18 to clarify training and drilling requirements to prepare all responsible entities for executing a fully integrated response to a major shipboard fire. Assess the need to clarify the role of external federal entities, such as the United States Coast Guard, during a major shipboard casualty. [Shore Establishment Support]

4. Reevaluate the designation of USFF as (EA) for Damage Control (DC), the charter and membership of the Damage Control Board of Directors (DCBOD), and current structure for creating Navy-wide DC policy. Formalize policy and resource allocation related to establishing a single point of responsibility for DC across the Navy. The DCBOD's mandate must enable it to proactively prevent and prepare for DC incidents, not just react to the specifics of the most recent events. [Oversight]

5. Reinstate the periodic issuance of naval messages providing new or modified instructions to raise awareness of policy issuance. [Oversight]

6. Create a single online platform that contains all Navy instructions across all levels of command and is accessible by all personnel. Ensure the platform is maintained by every Navy organization with published instructions so the policies are up to date. [Oversight]

7. Evaluate creating a tool to ensure all instructions applicable to each commander and Commanding Officer (CO) are readily available, with every requirement clearly identifiable. [Oversight]

8. Revise OPNAVINST 11320.23G to incorporate policy changes from all applicable command investigations into shipboard fires, USS BONHOMME RICHARD (LHD-6), and informal guidance promulgated by Commander, Navy Installation Command (CNIC) in the intervening years since the USS MIAMI (SSN-755) fire. Assess the need for formal policy guidance to implement standards and procedures for the tactical level integration of Naval Sea Systems Command (NAVSEA), CNIC, and fleet firefighting responses under all shipboard conditions. [Shore Establishment Support]

9. Revise the Required Operational Capabilities and Projected Operational Environment for Expeditionary Strike Group Staffs (ROC/POE) commanders to remove their requirement to support Type Commander (TYCOM) from their responsibilities. Clarity is needed regarding

who has Administrative Control (ADCON) responsibilities for every ship at every phase of the operational cycle. [Training and Readiness; Oversight]

10. With input from Commander, Naval Surface Force Pacific (CNSP), revise the OPNAVINST 5400.45 to clarify the ADCON relationship between the TYCOM, Amphibious Squadrons (PHIBRONs) and Major Command amphibious ships. [Oversight]

C. CNP

11. Evaluate the feasibility for an E-8 or E-9 to be billeted as the Senior Damage Controlman (U46A) on all Landing Helicopter Decks (LHD), Landing Helicopter Assaults (LHA), and Nuclear Aircraft Carriers (CVN) with no allowance for an E-7 to be a suitable replacement via business rules. [Training and Readiness]

12. (b) (5) [redacted]

D. NETC

13. Modify existing firefighting school curriculum at Surface Warfare Schools Command (SWSC)/Surface Warfare Officer's School (SWOS) to include greater emphasis on Industrial Shipboard Firefighting for all Inport Emergency Team (IET) members. FEDFIRE located at installations with afloat assets should participate in this school. Where practical, develop curriculum that teaches integration for FEDFIRE and Ship's Force for fighting shipboard fires, including actual integration in firefighting simulators. [Training and Readiness]

14. Evaluate a requirement for Chief Engineers (CHENG) to attend Damage Control Assistant (DCA) School prior to reporting to the ship. This would reemphasize their roles as Damage Control Officer (DCO) and ensure the appropriate level of knowledge in DC. [Training and Readiness]

E. OJAG

15. Modify Chapter II of JAGINST 5800.7 (series) to require all Command Investigations into shipboard fires be routed to NAVSEA, CNIC, USFF, and PACFLT. [Training and Readiness; Shore Establishment Support; Oversight]

16. Modify Chapter II of JAGINST 5800.7 (series), Appendix (Fires) to require an opinion on the sufficiency of any installation or municipal response, including Fire & Emergency Services (F&ES), to shipboard fires. [Shore Establishment Support]

F. Fleet Commanders

17. Implement OPNAVINST 3440.18, to include designations of roles and clear requirements for how drilling, training, and oversight should be accomplished. [Training and Readiness; Shore Establishment Support; Oversight]

G. USFF

18. In coordination with OPNAV, evaluate the governing processes by which the Executive Agent (EA) for DC role is carried out. [Oversight]

19. As the head of the DCBOD, ensure the DCBOD only accepts the "close-out" of fire safety action items or recommendations if the action item in question is complete. Items that are pending completion should not be accepted for "close-out." [Oversight]

20. As the head of the DCBOD, coordinate with the Office of the Judge Advocate General (OJAG) to promptly obtain copies of pertinent command investigations concerning fires and other shipboard casualties, both for previous command investigations and for future incidents. [Material Condition; Training and Readiness; Shore Establishment Support; Oversight]

21. In coordination with OPNAV and stakeholder organizations, align, streamline, and simplify the 8010 Manual, COMUSFLTFORCOMINST 4790.3, NSTM 555, OPNAVINST 11320.23G, OPNAVINST 3440.18, OPNAVINST 3440.17A, and any other applicable instructions to ensure clear guidance and direction. Overlapping or gapped guidance should be identified, aligned, corrected and implemented as required in accordance with standard change/revision issuance processes or JFMMBoD direction. [Material Condition; Training and Readiness; Shore Establishment Support; Oversight]

22. Coordinate with NAVSAFECEN and NAVSEA to evaluate fire data tracking across the Navy. Develop a plan to address any deficiencies to ensure that well-informed fire policy decisions can be made. [Material Condition; Training and Readiness; Shore Establishment Support; Oversight]

H. PACFLT

23. Review the availability of barges in the San Diego area and whether barge pressures are driving decision-making in the maintenance process. Develop a specific set of requirements to be accomplished before a crew can move back aboard a ship in an availability, thereby enabling the removal of the provided berthing barge. Joint TYCOM and NAVSEA requests should be required prior to personnel moving off the barge and back aboard a ship without all requirements being met. [Shore Establishment Support; Oversight]

24. Provide input to OPNAV to clarify the ADCON chain of command for Major Command amphibious ships. [Oversight]

I. CNSP/CNSF

25. Coordinate with numbered Fleet Commanders to clarify the roles and responsibilities for all Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG) regarding their oversight and engagement for subordinate ships executing maintenance availabilities. [Material Condition; Training and Readiness; Shore Establishment Support; Oversight]

26. Evaluate DC requirements and practices to ensure that fire prevention and response policies and practices take into account the threat of shipboard arson. [Material Condition; Training and Readiness; Oversight]

27. Assess and codify the role of Port Engineers in regards to fire safety and in regards to the Fire Safety Council (FSC). Review whether Port Engineer hiring requirements are restricting the hiring of valuable personnel with Navy backgrounds. [Training and Readiness; Shore Establishment Support]

28. Determine the appropriate stages for SWOS to teach the 8010 Manual in the DCA, Department Head, XO/CO Fleet Up Command, and Major Command pipelines, to include specific examples of fires in ships during availabilities. Use the fire and ship's survivability training provided to CVN Prospective COs, XOs and Reactor Officers as a model for the course of instruction. [Training and Readiness]

29. Review and promulgate guidance in regards to wearing Navy Working Uniforms (NWU) while shipboard and any impact the wearing of NWUs may have on the ability of Ship's Force to quickly respond to fire. [Training and Readiness]

30. Reevaluate DC certification and proficiency reporting and assessments they relate to availabilities. Consider making Readiness Evaluation Three (READ E-3) a certifying/decertifying event, with the 8010 Manual Chapter 12 drill as a capstone event. [Material Condition; Training and Readiness; Oversight]

31. Given that fire risks are salient in all phases of the Optimized Fleet Response Plan (OFRP), evaluate turning DC into a rolling certification or otherwise account for the long gaps in DC certification and lack of external objective assessments for ships when sustainment and maintenance phases are extended. [Material Condition; Training and Readiness; Oversight]

32. Assess OPNAVINST 3120.32 and provide input to OPNAV on whether it is appropriate for ships to have different departments operating in different numbers of duty sections. If this is determined to be allowable practice, provide direction on how to properly train and execute casualty response when the section on-duty may have never run drills together as a team. [Training and Readiness]

33. Coordinate with NAVSEA to require all FSC minutes to be routed to Commander, Naval Surface Force Atlantic (CNSL)/Commander, Naval Surface Force Pacific (CNSP) N43. Some

FSC waivers should require CNSL/CNSP N43 concurrence when they would significantly change a ship's fire safety posture. CNSL/CNSP should review past FSC waivers and clearly delineate what types of waivers could be made without CNSL/CNSP concurrence and which should require it. [Training and Readiness; Shore Establishment Support; Oversight]

34. Coordinate with NAVSEA and CNIC to ensure that all 8010 Manual Chapter 12 and 13 fire drills are assessed by appropriate actors from the Systems Command (SYSCOM), TYCOM, and civilian firefighting communities. [Shore Establishment Support; Oversight]

35. Revise the COMNAVSURFPACINST/COMNAVSURFLANTINST 3541.1A and Fire Marshal instruction to incorporate changes previously briefed to DCBOD. [Training and Readiness]

36. Assess whether Portable Exothermic Cutting Units (PECUs) and other portable damage control equipment on the San Diego waterfront are within an adequate state of readiness to respond to a casualty. Evaluate whether Mobility-Damage Control (MOB-D) or Maintenance Material Management (3M) certifications should better assess this equipment periodically. [Material Condition]

37. Review all requirements and policies to ensure there is adequate oversight of ships in availabilities; specifically, that all subordinate commanders are carrying out sufficient oversight of the DC posture of ships undergoing availabilities. In this review, ensure there is sufficient training on the 8010 Manual for key shipboard personnel, similar to how shipboard personnel on nuclear vessels going through an availability are trained. [Material Condition; Training and Readiness; Oversight]

38. Evaluate how subordinate chains of command are structured regarding responsibility for availability oversight. Specifically assess whether assigning an amphibious squadron as solely responsible for ships in the maintenance phase would allow for more effective oversight. [Oversight]

39. If PHIBRONs are clearly realigned to have responsibility for availability oversight, ensure the PHIBRON N4 billets are filled by qualified personnel. Additionally, ensure enlisted personnel billeted to the N4 shop have sufficient Landing Platform/Dock (LPD), Dock Landing Ship (LSD), and/or LHD experience, to include an Engineering Officer of the Watch (EOOW) qualification in one or more of these platforms. [Oversight]

40. Require the Fire Marshal Qualification as a prerequisite for enlisted Engineering Duty Officer (EDO) Qualifications. [Training and Readiness]

41. Assess whether the addition of non-engineers to IETs to ensure that IETs are able to respond to a casualty without impacting required engineering functions is prudent. Require IET watchbills to be produced in Relational Administrative Data Management system (R-ADM) and that assigned IET members will not be assigned to non-roving watch positions during the duty

day. Require that Fire Marshals have no other watchstanding duties on their duty day. [Training and Readiness]

42. Align, streamline, and simplify guidance regarding installed firefighting system requirements prior to fuel onload, crew move-aboard, and Light-Off Assessment (LOA) by ship class. Evaluate whether TYCOM certification is needed to ensure fire suppression systems are adequate. [Material Condition; Oversight]

43. Assess the timing of Damage Control Material Assessment (DCMA) certification requirements in light of the findings in this report. [Training and Readiness; Oversight]

44. For ships in an availability, establish rigorous standards for Inactive Equipment Maintenance (IEM), to include lay-up and start-up and phased coverage plans and guidance on what equipment and systems or combination of equipment and systems should not be placed in IEM. Evaluate how TYCOM N43 should provide oversight of this plan. [Material Condition; Oversight]

45. Revise the process used to tracks drills Training & Operational Readiness Information Services-Training Figure of Merit (TORIS-TFOM) paying special attention to ensure each duty section on a ship has performance scores for that specific duty section entered for required exercises. In addition, consider adding a rigid time requirement to the Afloat Training Group (ATG) grade sheets for DC casualty response that, if exceeded, require the drill to receive a failing grade. Define which CNSP Department Head is responsible for monitoring exercise performance across the OFRP Phases. [Training and Readiness; Oversight]

J. ESG-3

46. Coordinate with CNSP to assess the process in which PHIBRONs transfer control of ships through the OFRP to ensure there is consistent and sufficient OPCON Immediate Superior in Command (ISIC) oversight of subordinate ships undergoing an availability. [Oversight]

K. Commanding Officers Executing or Supporting Maintenance Availabilities

47. Routinely and regularly review Chapter 8 of the U.S. Navy Regulations with special attention to articles 0802 and 0805. While individual requirements must be met, the readiness of in port duty sections should be measured and weighed carefully against article 0805. [Oversight]

48. As part of the ship's long-term planning process, assess how the future operating environment, including availabilities, changes safety threats to ship and crew. Create a plan to train for the expected changes and develop methods to maintain that proficiency through crew turnover and complacency. [Training and Readiness]

49. Chair Command Duty Officer (CDO) qualification boards and require the candidate to demonstrate proficiency in leading a major casualty response. [Training and Readiness; Oversight]

50. While in an industrial environment, maintain a process that gives a cumulative understanding of fire risk to establish context for additional risk decisions as the availability progresses. Of note, the NAVSEA Failure Review Board (FRB) made a similar recommendation that assigned this process to the FSC. [Material Condition; Training and Readiness]

51. When in an availability, implement a method of self-assessment in compliance with the 8010 Manual. [Material Condition; Training and Readiness]

52. Reinforce at all levels of seniority, and spot-check, that maintenance checks are documented as fully complete only when the equipment is performed exactly as required by the maintenance check. [Material Condition]

53. Establish a process where equipment in IEM status is periodically reviewed by Senior Leadership. Ensure a detailed plan exists for restoring equipment previously placed in an IEM status as the ship progresses through an availability. [Material Condition]

54. Maintain a training program in all phases of operations where all members of the command are trained and able to contribute positively to casualty response and hazard identification. [Training and Readiness]

55. Set clear standards and expectations for watchbills and watchstanding. Spot-check for compliance. An ineffective in port watchbill could be more consequential than an underway watchbill; in the latter situation, the entire crew is readily available in the event of an emergency. [Training and Readiness; Oversight]

56. Assess process for deviations from safety requirements in exchange for improving the project cost or schedule profiles without a formal written concurrence from the organization levying the requirement. To better balance probability and severity of risk, the relationship strength within a project should be strengthened by identification and adherence to standards rather than using risk acceptance as a bargaining currency. [Material Condition; Oversight]

57. Conduct drills that challenge responders and generate areas to improve on communications, equipment readiness, and personnel performance weaknesses. [Training and Readiness]

L. NAVSEA

58. In coordination with OPNAV and stakeholder organizations, align, streamline, and simplify the 8010 Manual, COMUSFLTFORCOMINST 4790.3, NSTM 555, OPNAVINST 11320.23G, OPNAVINST 3440.18, OPNAVINST 3440.17A, and any other applicable instructions to ensure clear guidance and direction. Overlapping or gapped guidance should be identified, aligned,

streamlined, simplified, and implemented as required in accordance with standard change/revision issuance processes or JFMMBoD direction. [Material Condition; Training and Readiness; Shore Establishment Support; Oversight]

59. Revise the 8010 Manual to all concerns addressed in this report. Specifically address the following:

a. Remove the term Ship Repair and/or Construction Activities (SRCA) and clearly define responsibilities in the commonly understood terms of the Naval Supervisory Authority (NSA) and Lead Maintenance Activity (LMA) used in COMUSFLTFORCOMINST 4790.3. [Shore Establishment Support]

b. Require a fire drill within 30 days of any berth shift, which changes the responding F&ES provider that would integrate with Ship's Force. [Training and Readiness; Shore Establishment Support]

c. Require distribution of FSC minutes to, at a minimum, the Ship CO, the ISIC Commander, the TYCOM N43, Waterfront CHENG, NAVSEA Ship Design Manager (SDM), and the NSA Safety and Operations Department Heads. [Shore Establishment Support; Oversight]

d. Remove some waiver authority from the FSC level, identifying those items which could be approved by the NSA and those which require NAVSEA deviation approval. [Training and Readiness; Shore Establishment Support; Oversight]

e. Provide unambiguous failure criteria for 8010 Manual Chapter 12 and 13 drills, including time metrics for placing sustained agent on fire. [Training and Readiness; Shore Establishment Support]

f. In consultation with the DCBoD, develop grading criteria for F&ES response to shipboard fires. [Shore Establishment Support; Oversight]

g. Create requirements for what specifically must be accomplished to demonstrate the readiness condition of the ship's firemain before removing a tested and functional temporary firemain. [Material Condition]

h. Require 8010 drills to include challenges when installed firefighting system capabilities are degraded. [Training and Readiness; Shore Establishment Support]

60. Evaluate whether the sporadic implementation of 8010 Manual requirements through NAVSEA Standard Items (NSI) has contributed to the lack of effective implementation at the Regional Maintenance Centers (RMC) and whether revising the 8010 Manual, to be invoked wholesale in contracts, would be more effective. This review should specifically address requirements of the 8010 Manual that are not covered by NSIs or apply to Ship's Force or the RMC to ensure that they are carried out. [Shore Establishment Support]

61. Review ownership of and technical authority over the 8010 Manual and whether confusion over these roles contributes to incomplete implementation at the RMCs or a lack of appropriate deviation processes. Evaluate whether the direction to other echelons (i.e., TYCOM, CNIC) in the 8010 Manual should prompt the 8010 Manual to be issued by OPNAV. [Shore Establishment Support]

62. Coordinate with Fleet Commanders to review the sufficiency of billeting for all RMCs to ensure that key personnel with fire safety responsibilities have sufficient experience and competency to carry out their roles. [Shore Establishment Support]

63. Revise NSTM 555 to account for fighting fires in the vehicle spaces of LHD-class amphibious ships. [Training and Readiness; Shore Establishment Support]

64. Review whether the Commander, Navy Region Maintenance Center (CNRMC) structure provides an effective framework for overseeing RMC operations. Include in this evaluation whether CNRMC possesses the correct level of expertise to exercise management oversight of all functional areas, whether it may operate best as an echelon 3 command or as a department of NAVSEA. Part of this review should consider whether a single flag officer can properly fulfill CNRMC and NAVSEA 21 duties concurrently. [Oversight]

65. Review all processes in place for oversight of 8010 Manual compliance at the RMC level and whether CNRMC is manned adequately to carry out this safety oversight function. This review should include a comparative assessment of how 8010 Manual compliance oversight is being conducted in the public shipyards, taking into consideration the number of ships undergoing availabilities under each NSA. [Shore Establishment Support; Oversight]

66. Consider restoring a local independent oversight function, external to the RMC command structure, which independently assesses RMC compliance with technical requirements, to include fire safety standards. This organization should have unfettered reporting access to CNRMC and/or NAVSEA Headquarters (HQ) to ensure cost and schedule pressures do not allow safety requirements to be de-emphasized in the execution of an availability. [Oversight]

67. Perform a Hazard Assessment Report (HAR) on the performance of availabilities general berthing piers (i.e., piers not designated for maintenance) to quantify the risk posture that currently exists. [Shore Establishment Support; Oversight]

68. Review IEM requirements and start-up maintenance for Aqueous Film Forming Foam (AFFF) systems, with a particular emphasis for start-up maintenance requirements after restoring an AFFF station which was previously in an IEM status. [Material Condition]

69. Coordinate with CNIC to review the designation of repair piers onboard naval installations to ensure they properly accommodate ships undergoing scheduled maintenance availabilities. [Shore Establishment Support]

70. Coordinate with CNSF and CNIC to ensure that all 8010 Manual Chapter 12 and 13 fire drills are assessed by appropriate actors from the SYSCOM, TYCOM, and civilian firefighting communities. [Training and Readiness; Shore Establishment Support; Oversight]

71. Review the findings of the Balisle report, specifically with regard to the scope of efforts under the RMC, in light of this report and determine whether RMC COs are capable of maintaining adequate control over their assigned duties. [Shore Establishment Support; Oversight]

M. CNRMC

72. Evaluate how all CNRMC organizations have implemented the 8010 Manual. As these reviews have historically focused on the actions which are levied on private shipyards through the NSIs, this review should focus on compliance in areas which are functions of the NSA, Ship's Force, or other government organizations. [Shore Establishment Support; Oversight]

73. Assess whether the 8010 Manual is being effectively implemented across the RMCs. [Shore Establishment Support; Oversight]

74. Require all RMCs to ensure that LMAs carry out all required roles, as required by the 8010 Manual, or otherwise seek NAVSEA approval for deviations from that requirement. [Shore Establishment Support]

75. Require all RMCs to review NSI requirements related to fire safety to ensure all are implemented fully at the private shipyards. [Shore Establishment Support]

76. Ensure guidance related to fire safety planning matches the current contracting framework following the shift from Multi-Ship Multi Option (MSMO) to Multi-Award Contract/Multi-Order (MACMO) contracting. Specifically evaluate whether any changes are necessary for the Integrated Project Team Development (IPTD) process. [Shore Establishment Support]

77. Ensure that all RMC COs, XOs, and Executive Directors (ED) understand their ownership or risk related to fire safety. Specifically, because the 8010 Manual requires RMC concurrence on every fire safety decision during an availability, RMC COs are concurrently responsible for the fire safety of a ship in an availability. [Shore Establishment Support; Oversight]

78. Review safety functions across the RMCs that are being filled by contract employees to assess whether they would be better executed by a government employee or if the safety positions are inherently governmental. [Shore Establishment Support; Oversight]

79. Ensure all Fire Safety Officers (FSO) and Fire Safety Watches (FSW) are trained to ensure all materials are stored in accordance with the 8010 Manual; additionally, ensure that they understand they are responsible for Ship's Force conduct, as well as the contractor. All fire safety discrepancies identified by the FSO must be entered into a daily report that enables

tracking and trend analysis over time, and must be distributed to all key stakeholders within a project. [Shore Establishment Support; Oversight]

80. Ensure the FSO, as Chairman of the FSC, has an equal vote in all fire safety decisions. [Shore Establishment Support; Oversight]

81. Ensure that FSOs are aware they can stop work if they identify a significant fire safety violation. [Shore Establishment Support; Oversight]

82. Ensure all FSOs are qualified on the ship class to which they are assigned and provide detailed guidance as to what these qualifications require. [Shore Establishment Support; Oversight]

83. Monitor and track all 8010 Manual Chapter 12 and 13 drills for ships to ensure the periodicity requirements of the 8010 Manual are followed. [Training and Readiness; Shore Establishment Support; Oversight]

84. Create a process to ensure effective sharing of lessons learned from shipboard fires across the RMCs. [Shore Establishment Support; Oversight]

85. Clarify the role of the Code 200 Technical Director in the adjudication of technical decisions. Coordinate with NAVSEA 05 regarding any necessary delegation of technical authority. [Shore Establishment Support; Oversight]

86. Ensure materials used to suspend temporary services at all RMCs are compliant with 8010 Manual requirements and applicable NSIs. [Material Condition; Shore Establishment Support]

87. Conduct a periodic review of all Fire Response Plans (FRP) prepared for availabilities throughout the RMCs to ensure compliance with the 8010 Manual. [Shore Establishment Support; Oversight]

N. SWRMC

88. Fill the Code 106B and Government FSO billets. [Shore Establishment Support]

89. Assign Project Support Engineers (PSEs) to attend the FSC meetings, as required by the 8010 Manual. [Shore Establishment Support]

90. Pursue funding for General Schedule (GS) billets for all Southwest Regional Maintenance Center (SWRMC) FSOs. Alternatively, evaluate using military personnel to carry out this function. [Shore Establishment Support]

91. Ensure FSOs are identifying and recording fire safety discrepancies against Ship's Force and that reports of these violations are being sufficiently reviewed by all relevant stakeholders. [Shore Establishment Support]

92. Validate that FSCs are conducted as properly-convened meetings, with all members formally voting on topics raised. Ensure all members understand that their independent judgment is required on each issue of fire safety. [Shore Establishment Support]

93. Validate the qualifications of the FSC members to ensure those personnel assigned to that role have the requisite knowledge and experience to carry out their duties. [Shore Establishment Support]

94. Develop a process for higher-level review of FSC minutes to ensure that all SWRMC departments understand the fire risk posture of all the ships undergoing availabilities. [Shore Establishment Support]

95. Ensure all 8010 Manual drills are executed within the required periodicity. Ensure requests for deviation be approved by NAVSEA, via CNRMC. Clarify with FSOs that the 8010 Manual does not allow FSC deviations from the specific timing requirements of 8010 Manual Chapter 12 drills. [Training and Readiness; Shore Establishment Support]

96. Execute annual major 8010 Manual fire drills at each LMA, or require the actions of the 8010 Manual, Section 13.3.11, for all LMAs if they fall under the same F&ES response. Ensure requests for deviation be approved by NAVSEA, via CNRMC. [Training and Readiness; Shore Establishment Support]

97. Comply with the 8010 Manual requirement to provide radios to ships within availabilities which are interoperable with responding fire departments and available for immediate use. Require daily operational tests of the radios, as required by the 8010 Manual. If this requirement cannot be met, seek NAVSEA approval for a deviation from the requirement. [Material Condition; Shore Establishment Support]

98. Evaluate whether Code 300 is adequately enforcing NSI requirements related to fire safety and if knowledgeable personnel are engaged during all contract phases, specifically contract planning, initiation, and solicitation. [Shore Establishment Support]

99. Review the SWRMC CDO program to ensure that CDOs are trained and located to appropriately respond to an emergency. As part of this review, evaluate whether the policy of allowing CDOs to depart Naval Base San Diego (NBSD) has an effect on the prompt response to a casualty. [Shore Establishment Support]

100. Align, streamline, and simplify SWRMCINST 5100.11C Fire Response Plan and 5100.2B Fire Safety Plan to properly address all issues contained within this report. [Shore Establishment Support]

101. Realign the FSO under the operations department, as required by the 8010 Manual. [Shore Establishment Support]

102. Review whether the initial and periodic training provided to Ship's Force personnel regarding fire safety during an availability is adequate. Special consideration for crew rotation over the course of an availability must be factored into this review. [Training and Readiness; Shore Establishment Support]

103. Evaluate developing a training environment within SWRMC that would allow Ship's Force members to practice operation of quick-disconnects utilized by maintenance providers. [Training and Readiness; Shore Establishment Support]

104. In conjunction with installation COs, review and determine a single command and control structure for use during shipboard safety incidents. [Shore Establishment Support]

105. Coordinate with NBSD to collocate the Emergency Operations Center (EOC) and Emergency Command Center (ECC) during shipboard emergencies in which each organization has equity. This construct should be trained and drilled to ensure effectiveness. [Shore Establishment Support]

106. For ships undergoing an availability on Navy installations, provide installation COs with a weekly summary of major work being conducted that could impact power and installed firefighting systems. [Shore Establishment Support]

107. Review contracts associated with fire safety and other issues identified in this report to evaluate contractor compliance with all fire safety responsibilities. [Shore Establishment Support]

O. CNIC

108. Evaluate FEDFIRE's requirements for shipboard fire prevention, training, and response to ensure requirements are effectively published and satisfied. [Shore Establishment Support; Oversight]

109. Execute Program Compliance Assessments for Navy F&ES departments in accordance with OPNAVINST 11320.23G to ensure compliance with all higher-level directives and policies within the required periodicities. [Shore Establishment Support, Oversight]

110. Assess whether the equipment utilized by US Fire Pump should be acquired for shore installations berthing Navy vessels, including public shipyards. [Shore Establishment Support]

111. Assess the adequacy of Mutual Aid Agreements (MAA) of all installation communication plans and MAAs with local municipal responders. [Shore Establishment Support, Oversight]

112. Validate through Region Commanders that all installations with RMCs have developed protocols to integrate mutual aid MAAs and Memorandums of Understanding (MOU) into their EM and Fire Response plans. Conduct exercises annually to test the effectiveness of these MAAs and MOUs to ensure an effective integrated response to major shipboard fire event with local municipalities. [Shore Establishment Support, Oversight]

113. Validate through Region Commanders that all installations have established, exercised, and recently reviewed MAAs and MOUs with their local mutual aid partners annually. [Shore Establishment Support, Oversight]

114. Validate through Region Commanders that installations with Shipyards and RMCs have detailed Hazard-Specific Appendixes for Major Shipboard fires and that these annexes are coordinated with the shipyard and RMCs Fire Response Plans. [Shore Establishment Support, Oversight]

115. Develop programmatic measures to track known deficiencies, such as those existing with radio interoperability and FEDFIRE hose compatibility, until they are addressed to ensure leadership is consistently aware of risk. [Shore Establishment Support, Oversight]

116. Require MAAs with local Fire and Emergency Services (F&ES) to address specific communication, coordination, and training procedures for shipboard fire response and incorporate those procedures into a training plan. [Shore Establishment Support, Oversight]

117. Coordinate with NAVSEA and CNSP to ensure that all 8010 Manual Chapter 12 and 13 fire drills are assessed by appropriate actors from the SYSCOM, TYCOM, and civilian firefighting communities. Develop grading criteria for FEDFIRE during 8010 Manual drills and maintain appropriate documentation of FEDFIRE performance during these drills. [Shore Establishment Support, Oversight]

118. Coordinate with NAVSEA to review the designation of repair piers onboard naval installations to ensure they properly accommodate ships undergoing scheduled maintenance in availabilities. [Shore Establishment Support]

119. Review, in coordination with NAVSEA, all EM and Incident Action Plans (IAP) to ensure they adequately address the installation response to a major shipboard fire at an installation. [Shore Establishment Support, Oversight]

120. Incorporate training on role of installation COs during major shipboard fire response while pierside during the CO training curriculum. [Shore Establishment Support, Oversight]

P. CNRSW

121. Review the San Diego FEDFIRE Metro Area construct and its compatibility with the installation CO's absolute responsibility for the effectiveness of FEDFIRE on their installation. Clarify the roles and responsibilities under the Metro Area construct as necessary to support the installation CO. [Shore Establishment Support]

122. Review all Region FEDFIRE training requirements with respect to shipboard firefighting and whether they are currently being satisfied. Establish an auditable training oversight program

to ensure there is consistent tracking and reporting of FEDFIRE training. [Shore Establishment Support, Oversight]

123. Train all installation COs on their responsibility to oversee the execution of all FEDFIRE activities on their installation. [Shore Establishment Support]

124. Train all FEDFIRE personnel who respond to shipboard fires that the ship CO retains absolute authority and incident command at all times, to include the direction of responding personnel. [Shore Establishment Support]

125. Conduct periodic testing of all communications equipment used to engage with mutual aid partners to ensure interoperability. [Shore Establishment Support, Oversight]

Q. NBSD

126. Review FEDFIRE's training execution with regard to shipboard firefighting onboard NBSD. Ensure that each firefighter is maintaining standards in accordance with OPNAVINST 11320.23G and all other CNIC guidance. [Shore Establishment Support]

127. In coordination with waterfront COs, ensure periodic FEDFIRE shipboard walkthroughs for all classes of ships are being conducted. [Shore Establishment Support]

128. Engage NAVFAC about the availability of firemain on Pier 2 and other piers that commonly host availabilities. Coordinate with SWRMC and CNSP regarding whether the current infrastructure is sufficient. Provide mitigation for requirements identified that will take time to gain funding for execution. [Shore Establishment Support]

129. Review, exercise, and update MAAs and MOUs regarding F&ES support with the City of San Diego, National City, and other mutual aid partners annually. [Shore Establishment Support]

130. Review all pier designations and assess whether any piers used for maintenance require re-designation or other action. In coordination with SWMRC, evaluate whether any additional precautions are required to mitigate risk associated with availabilities being conducted on piers not properly designated or equipped for maintenance. [Shore Establishment Support]

131. Coordinate with SWRMC to collocate the EOC and ECC during shipboard emergencies in which each organization has equity. This construct should be trained and drilled to ensure effectiveness. [Shore Establishment Support]

132. Coordinate with SWRMC to review the adequacy of the pier laydown process for ships in availabilities. [Shore Establishment Support]

133. Evaluate the ability to meet the number of brows required for all classes of ships undergoing availabilities on NBSD. Provide a written explanation to NAVSEA via CNIC for any brow requirement that cannot be met by NBSD. [Shore Establishment Support]

134. Coordinate with SWRMC to codify means of ensuring pier cleanliness and storage are jointly enforced on contractors when availabilities are performed on NBSD. NSBD, FEDFIRE and the Project Team (PT) for an availability should concur on a formal and detailed pier laydown plan for any ship conducting an availability at NBSD. [Shore Establishment Support]

Chapter 5 – Accountability

The convening order requires recommendations on accountability. The total loss of a capital asset demands close examination of all personnel to produce fully-informed recommendations. The appointing order makes clear that our rigorous assessment must not be impacted by rank, paygrade, or level of command of a responsible person, entity, or organization.

This report identifies an array of deviations and failures, but not all are causal or directly contributing factors to the fire aboard and loss of USS BONHOMME RICHARD (LHD-6). One conclusion is clear: no single failure resulted in the loss of the ship, and thus accountability is not focused on any one individual, but rather shared across various Commanders, Commanding Officers (CO), and subordinate personnel. In some instances there are errors of omission while others are marked with acts of commission.

In developing these recommendations, the investigation team developed the below framework to maintain a deliberate and consistent approach. The team invested considerable time with this framework after findings of fact and opinions were complete. Three central factors were employed in evaluating all individuals for a potential accountability recommendation:

(1) Were an individual's actions or inactions causal or otherwise contributing to the loss of BONHOMME RICHARD?

(2) Did the individual have a duty or responsibility related to protecting BONHOMME RICHARD from risk accumulation that they failed to meet?

(3) For individuals in a unique position of seniority and responsibility, was their performance in executing oversight and judgment deficient enough to question confidence?

A. BONHOMME RICHARD

1. CAPT Gregory Thoroman, USN. As Commanding Officer (CO), his responsibility is absolute, commensurate with his responsibilities. The execution of his duties created an environment of poor training, maintenance, and operational standards that directly led to the loss of the ship.

2. CAPT Michael Ray, USN. As Executive Officer (XO) and the Damage Control Training Team (DCCT) Leader, he is responsible to maintain awareness of the ship's survivability, manage the crew's readiness to manage casualties, and serve as principal oversight for all shipboard drills and exercises in Damage Control (DC). Additionally, as the ship's Maintenance & Material Management System (3M) Manager, he is responsible for the implementation of an effective restoration program for equipment in an Inactive Equipment Maintenance (IEM) status. His failure to execute these responsibilities directly led to the loss of the ship.

3. Command Master Chief (CMC) Jose M. Hernandez, USN. As Command Master Chief, he occupies a significant role in every aspect of the ship's readiness and mission accomplishment and is responsible for aligning the objectives and culture of the ship's senior enlisted leadership to effectively execute the ship's mission. His failure to effectively execute this role directly led to the loss of the ship.

4. (b) (6) . As Chief Engineer (CHENG), he is responsible as the senior officer in the engineering department, in addition to his responsibilities as the Damage Control Officer (DCO). His failure to effectively execute these roles directly led to the loss of the ship.

5. (b) (6) . As Damage Control Assistant (DCA), he is the primary assistant to the DCO in the area of DC and firefighting and is the immediate officer in charge of DC programs, including administration, material readiness, and training. His failure to effectively execute this role directly led to the loss of the ship.

6. (b) (6) . As Senior Watch Officer (SWO), he is responsible for the performance of all watchstanders, including the training and qualification standards for Command Duty Officers (CDO). Further, he is responsible for the implementation of watchstanding policies and practices. His failure to effectively execute this role directly led to the loss of the ship.

7. (b) (6) . As First Lieutenant, he is responsible for managing the stowage of material and equipment in compartments owned by deck department, including Lower Vehicle Stowage Area (Lower V) and Upper Vehicle Stowage Area (Upper V). His failure to effectively execute this role directly led to the loss of the ship.

8. (b) (6) . As Senior Medical Officer (SMO), he is responsible for his personnel, material, and equipment, to include storage within the medical ward. His failure to effectively exercise oversight of this responsibility contributed to the loss of the ship.

9. (b) (6) . As CDO on the day of the fire, he is responsible for the command and control of the ship and holds the authority of the CO while on duty. His failure to effectively execute this role directly led to the loss of the ship. In mitigation, this was (b) (6) first time serving as the CDO and his efforts were hindered by a crew that was not properly trained or prepared to respond to the casualty. Additionally, as the Assistant Damage Control Assistant (ADCA), he raised concerns about the readiness of the crew and the material condition of the ship in the months prior to the fire, but BONHOMME RICHARD leadership did not take effective mitigating nor corrective actions.

10. (b) (6) . As the Engineering Department Leading Chief Petty Officer (LCPO), he is responsible to exercise oversight of the engineering department watchbill process and supervise all enlisted personnel within engineering department. His failure to effectively execute this role directly led to the loss of the ship.

11. (b) (6) . As a member of Duty Section 5 on the day prior to the fire, he departed the ship overnight without authorization and returned

just prior to duty section turnover. As the senior enlisted chief petty officer present from engineering department when the fire broke out, he failed to exercise effective direction of the fire response effort.

12. (b) (6) . As the senior enlisted member of engineering department on duty on 12 July 2020, he is responsible to exercise effective direction of the fire response effort. His failure to effectively execute this role directly led to the loss of the ship.

13. (b) (6) . As Officer of the Deck (OOD) on the day of the fire, he is responsible for the safe and proper operation of the ship and station, to include all communications from the Quarterdeck, reports, and supervision of the watch. His failure to effectively execute this role directly led to the loss of the ship.

14. (b) (6) . As Damage Control Leading Chief Petty Officer (DCLPO), he is responsible for understanding all phases of the ship's DC procedures, to include equipment maintenance and training of personnel. His failure to effectively execute this role directly led to the loss of the ship. In mitigation, (b) (6) was unable to work aboard the ship in the preceding 45 days prior to the fire due to a medical condition.

15. (b) (6) . As the Repair Division LPO, he is responsible for understanding all phases of the ship's DC procedures, to include equipment maintenance and training of personnel. As part of the team responsible for tracking and documenting the completion of all maintenance checks of the Aqueous Film Forming Foam (AFFF) system, he failed to follow proper procedure by certifying the system was operational despite the existence of discrepancies. On 12 July 2020, he was ineffective in organizing and leading efforts in support of combatting the casualty. His failure to effectively execute these roles directly led to the loss of the ship.

16. (b) (6) . As Engineering Duty Officer (EDO) on the day of the fire, he is responsible for all DC efforts from DC Central. His failure to effectively execute this role directly led to the loss of the ship.

17. (b) (6) . As a Damage Control Petty Officer, he is responsible for understanding all phases of the ship's DC, procedures to include equipment maintenance and training of personnel. As the ER04 Work Center Supervisor (WCS), he is responsible for tracking and documenting the completion of all maintenance checks. On 12 July 2020, as the Duty Fire Marshal, he was responsible to effectively organize and lead firefighting efforts to combat the casualty. His failure to effectively execute these roles directly led to the loss of the ship.

18. (b) (6) . As a member of Duty Section Six In-Port Emergency Team (IET) on the day of the fire, he was late and missed duty section turnover, failing to report aboard the ship until more than an hour after the fire started. His failure to be at his appointed place of duty degraded the fire response effort.

B. Southwest Regional Maintenance Center

19. CAPT David Hart, USN. As Commanding Officer (CO), his responsibility is absolute, commensurate with his responsibilities. The execution of his duties enabled an environment of substandard execution of fire safety practices, lack of adherence to written standards, and ineffective execution of the mission that directly led to the loss of the ship.

20. (b) (6) . As Executive Director (ED), he is responsible for the operations and management of the Regional Maintenance Center (RMC) in the execution of private-sector, depot-level maintenance and modernization of surface ships and fleet technical and engineering support. The execution of his duties enabled an environment of substandard execution of fire safety practices, extended gaps in critical safety billets, lack of adherence to written standards, and ineffective execution of the mission that contributed to the loss of the ship.

21. (b) (6) . As the Environmental Safety and Health Department Head (Code 106), he is responsible to ensure compliance with the 8010 Manual when executing availabilities, to include supervision of the Fire Safety Officers (FSO). His failure to effectively execute this responsibility contributed to the loss of the ship.

22. (b) (6) . As the Waterfront Operations Department Head (Code 300), she is responsible for all depot level work for ships in San Diego, to include both planning and execution of maintenance and was responsible for ensuring the Emergency Response Team (ERT) was staffed with the right experience from her department and ready for a casualty. Her failure to effectively execute this responsibility contributed to the loss of the ship.

23. (b) (6) . As the Waterfront Operations Director (Code 300), he is responsible for the performance of all Southwest Regional Maintenance Center (SWRMC) Project Managers (PM) and the execution of the availabilities they oversee. His failure to effectively execute this responsibility contributed to the loss of the ship.

24. (b) (6) . As the Code 315 Program Manager (PM) for Landing Helicopter Assault (LHA)/Landing Helicopter Deck (LHD) Class, he is responsible for the execution of maintenance availabilities on LHD Class ships, to include oversight of the PM for BONHOMME RICHARD. His failure to effectively execute this responsibility contributed to the loss of the ship.

25. (b) (6) . As the Project Manager (PM) of the BONHOMME RICHARD availability and a member of Code 300, she is responsible for oversight and execution of the availability to include being a member of the Fire Safety Council (FSC). Her failure to effectively execute these responsibilities directly led to the loss of the ship.

C. Naval Base San Diego

26. CAPT Mark Nieswiadomy, USN. As Commanding Officer (CO), his responsibility is absolute, commensurate with his responsibilities. The execution of his duties created an environment of poor training of installation personnel, an ineffective installation Fire and

Emergency Services (F&ES) program, and lack of oversight to maintenance activities taking place on Naval Base San Diego (NBSD) that contributed to the loss of the ship. In mitigation, the command and control structure of the Federal Firefighting Department (FEDFIRE) Metro Area hindered the ability of NBSD to assert control over FEDFIRE assets and personnel to execute his responsibilities.

27. FEDFIRE Metro (b) (6). As installation Fire Chief, she is responsible for all F&ES operations to the installation. These responsibilities include management and organizational oversight of installation FEDFIRE personnel, execution of all applicable directives, facilitating development of all Mutual Aid Agreements (MAAs), and training of FEDFIRE personnel. Her failure in the execution of her duties contributed to the loss of the ship. In mitigation, the command and control structure of the FEDFIRE Metro Area caused significant confusion regarding her authority and responsibilities.

D. Navy Region Southwest

28. RDML Bette Bolivar, USN. As Commander, Navy Region Southwest (CNRSW), she is responsible for the satisfactory accomplishment of the mission and duties assigned to the installations within the Region. The execution of her duties contributed to the loss of the ship.

29. FEDFIRE Region . As Regional FEDFIRE Chief, he is the senior Fire and Safety Services officer and program manager responsible for all execution of the FEDFIRE mission. These responsibilities include coordinating administrative authority over all installation Chiefs, reviewing the operations and capabilities of each installation annually, facilitating the development of MAAs, and implementing procedures to evaluate and improve all aspects of the Region F&ES program. His failure in the execution of his duties contributed to the loss of the ship.

E. Navy Regional Maintenance Center

30. RDML Eric Ver Hage, USN. As Commander, Navy Regional Maintenance Center (CNRMC), he is responsible for the satisfactory accomplishment of the mission and duties assigned to his commands. His failure in the execution of his duties contributed to the loss of the ship.

31. (b) (6). As the Safety Manager, he is responsible for oversight of fire safety programs for all subordinate regional maintenance centers. His failures in the execution of his duties contributed to the loss of the ship.

F. Navy Installations Command

32. (b) (6). As CNIC N30, he is the senior member of the Navy F&ES and is responsible to execute the entire program to protect Navy Fleet, fighter, and families at all Navy installations. His failure in the execution of his duties contributed to the loss of the ship.

G. Amphibious Squadron FIVE

33. CAPT Tony Rodriguez, USN. As Commander, Amphibious Squadron FIVE (PHIBRON-5), he is responsible for the satisfactory accomplishment of the mission and duties to the ships assigned under his command. His failure in the execution of his duties contributed to the loss of the ship. In mitigation, CAPT Rodriguez provided some oversight to the BONHOMME RICHARD that is expected of an operational commander, and the roles and responsibilities from CNSP were not codified.

H. Naval Surface Force Pacific Fleet

34. VADM Richard Brown, USN. As Commander, Naval Surface Force Pacific Fleet, he is responsible for the satisfactory accomplishment of the mission and duties to the ships assigned under his command. His failure in the execution of his duties contributed to the loss of the ship.

I. U.S. Pacific Fleet

35. RDML Scott Brown, USN. As the Fleet Maintenance Officer (N43), he is responsible to exercise oversight of all maintenance and modernization activities in the Pacific Fleet area of responsibility. His failure in the execution of his duties contributed to the loss of the ship.

J. U.S. Fleet Forces Command

36. RDML William Greene, USN. As the Fleet Maintenance Officer (N43), he is responsible to exercise oversight of all maintenance and modernization activities for the U.S. Fleet Forces area of responsibility. His failure in the execution of his duties contributed to the loss of the ship.

Chapter 6 – Meritorious Performance of Duty Recommendations

To carry out an adequate search for instances of meritorious performance, the investigation team maintained an ongoing list that warranted consideration. This list was re-visited throughout the course of the investigation. The below list represents performance that was above and beyond what was expected of personnel in the execution of their mission, functions, and tasks. There were many instances of personnel who risked their lives during the course of the firefight, but the below list is limited to exceptionally noteworthy conduct.

A. BONHOMME RICHARD

1. (b) (6) was in DC Central when the OOD called to report smoke in Lower V. He responded immediately by investigating and requesting the OOD to call away the casualty. He attempted to descend to Lower V several times. Driven back by heat and smoke, he integrated with arriving FEDFIRE teams, directing them toward the fire and assisting them in laying hose to Lower V. (b) (6) was part of the FEDFIRE team that briefly applied water for cooling in Lower V before the team withdrew due to an SCBA low air alarm. (b) (6) later joined a FEDFIRE team to search for possible missing Sailors, briefly reentering Upper V via the sideport ramp, then climbing an aerial ladder to the flight deck. Although the investigation team was only able to obtain a partial account of (b) (6) 's actions in the first three hours of the fire, his individual attempts to enter Lower V and repeated efforts to assist FEDFIRE in reaching Lower V, followed by his decision to accompany a FEDFIRE rescue team after learning of possible missing Sailors, all undertaken without direction from his superiors, are commendable.

2. Several BONHOMME RICHARD Sailors unilaterally acted to verify that no personnel remained in the berthing areas as the ship was evacuated. While the exact identity of each of these Sailors cannot be determined with certainty, their efforts to ensure no shipmates were left onboard is worthy of commendation.

3. While the span of the firefighting response and the multi-month delay in conducting interviews renders specific identification difficult, numerous BONHOMME RICHARD Sailors conducted commendable firefighting efforts throughout the multi-day fire response. After the first day, they repeatedly exposed themselves to danger over 12-hour shifts in their efforts to extinguish the fire.

B. NAVSEA Supervisor for Salvage

4. NAVSEA Supervisor for Salvage personnel contributed significantly to the fire response efforts through their effective coordination of numerous contractors, such as GPC/ESSM and US Fire Pump. In particular, (b) (6) , quickly responded to the casualty on 12 July

2020, identified SUPSALV resources that could assist, and took prompt action to activate contract support to further contribute to firefighting efforts.

C. CNIC Enterprise

5. FEDFIRE Firefighters. Given the sizable span of the firefighting response coupled with the delay in conducting interviews for this investigation, identification of specific noteworthy actions by FEDFIRE personnel was difficult. Notwithstanding this limitation, FEDFIRE firefighters were commendable in their efforts throughout the BONHOMME RICHARD fire response. FEDFIRE firefighters, some of whom traveled far distances from Region Southwest, worked multi-day shifts and repeatedly entered a challenging environment at great risk to themselves to combat the fire.

6. (b) (6) was on duty as RDC dispatcher on 12 July 2020. Despite having no requirement to monitor the Harbor Defense Net, he monitored radio traffic on that channel in the background of his assigned duties, which enabled him to overhear an exchange about smoke coming from BONHOMME RICHARD, which was very early in the incident. After attempting to confirm a casualty, (b) (6) unilaterally generated a fire and emergency services response without being prompted by a 911 call or other request. His actions directly contributed to FEDFIRE's rapid arrival on scene.

D. Others

7. San Diego Fire Department (b) (6) . (b) (6) was part of the SDFD teams combatting the fires in Upper V from approximately 0951 until 1035. At 1035, (b) (6) identified smoke conditions that he assessed could lead to an explosion and began ordering personnel to evacuate the ship. His actions were directly responsible for saving lives of countless personnel who would have otherwise been onboard during the 1050 explosion.

8. Helicopter Sea Combat Squadron THREE (HSC-3). HSC-3 conducted more than 1,649 water drops deploying 545,076 gallons of water in support of the fire response. While personnel in HSC-3's Southern California Offshore Range Detachment had received limited training on conducting aerial water drops in support of daytime wildfire firefighting operations, neither the SCORE detachment nor HSC-3's personnel had experience providing aerial water drops for an effort of this magnitude. HSC-3's actions contributed to firefighting and represented action that went above and beyond HSC-3's mission, functions, and tasks.

9. Personnel Responding from Across Waterfront. Personnel across the waterfront quickly came to the assistance of the BONHOMME RICHARD, offering their time, equipment, and supplies that contributed to the firefighting efforts.

10. NBSD Port Ops and Crews from FITZGERALD & RUSSELL in quick reaction to move ships from Pier 2. The personnel from these organizations executed swift action to move these ships away from the fire, which prevented damage to these vessels.

Appendices

Appendix A: Enclosures

(1) COMPACFLT Ltr N00/0976 of 4 Aug 20 (Convening Order)
(2) COMPACFLT Ltr N00/1106 of 15 Sep 20 (Modified Convening Order)
(3) COMPACFLT Ltr N00/1312 of 18 Nov 20 (Modified Convening Order)
(4) COMPACFLT Ltr N00/0242 of 22 Feb 21 (Modified Convening Order)
(5) Bureau of Alcohol, Tobacco, Firearms and Explosives Interview Summaries of BHR Personnel
(6) NCIS Interview of (b) (6) (BHR)
(7) USS BONHOMME RICHARD Duty Section 6 of 6 Roster
(8) USS BONHOMME RICHARD Watchbill of 12 Jul 20
(9) USS BONHOMME RICHARD Engineering Department Duty Section Roster
(10) USS BONHOMME RICHARD Muster Spreadsheet of 8 Oct 20
(11) NCIS Results of Screening Questionnaire for BHR Personnel of 20 Jul 20
(12) NCIS Interview of (b) (6) (FTZ)
(13) Summary of Interview of (b) (6) (BHR)
(14) Summary of Interview of (b) (6) (NBSD)
(15) NCIS Interview of (b) (6) (BHR)
(16) NCIS Interview of BHR Section Leaders 5 and 6 of 7 Aug 20
(17) Summary of Interview of (b) (6) (BHR)
(18) USS BONHOMME RICHARD Engineering Inport Watch Bill Duty Section 3 of 6 of 11 Jul 20
(19) Summary of Interview of (b) (6) (BHR)
(20) USS BONHOMME RICHARD Six Section CDO Watchbill of Jul 20
(21) USS BONHOMME RICHARD Watchbill of 11 Jul 20 to 12 Jul 20
(22) NBSD Base Access Control Report of 12 Jul 20 to 13 Jul 20
(23) Summary of Interview of (b) (6) (BHR)
(24) Summary of Interview of (b) (6) (BHR)
(25) USS BONHOMME RICHARD Duty Section 4 of 6 Watchbill of 12 Jul 20 (Recreated)
(26) USS BONHOMME RICHARD Watchbill Page 1 of 2 of 12 Jul 20
(27) Summary of Interview of (b) (6) (BHR)
(28) Summary of Interview of (b) (6) (BHR)
(29) NCIS Second Interview of (b) (6) (BHR)
(30) NBSD Base Access Control Report of 12 Jul 20
(31) NCIS Third Interview of (b) (6) (BHR) [Video]
(32) NCIS Interview of (b) (6) (BHR)
(33) NCIS First Interview of (b) (6) (BHR)
(34) NCIS Third Interview of (b) (6) (BHR)
(35) NCIS Interview of (b) (6) (BHR)
(36) NCIS Production of Event Timeline of 4 Aug 20

(37) NCIS First Interview of (b) (6) (BHR)
(38) NCIS Enclosure to Third Interview of (b) (6) (BHR)
(39) NCIS Second Interview of (b) (6) (BHR)
(40) Summary of First NCIS Video Interview of (b) (6) (BHR)
(41) Summary of Inquiry into the Fire Aboard USS BONHOMME RICHARD Vol 1-3 of 14 Jul 20
(42) Summary of Interview of (b) (6) (BHR)
(43) Summary of Interview of (b) (6) (BHR)
(44) Summary of Interview of , Nelson (BHR)
(45) Summary of Interview of (b) (6) (BHR)
(46) NCIS Interview of (b) (6) (BHR) [Disk]
(47) NCIS Interview of (b) (6) (BHR)
(48) Summary of Interview of (b) (6) (BHR)
(49) Summary of Interview of (b) (6) (BHR)
(50) NCIS Interview of (b) (6) (BHR)
(51) Summary of Interview of (b) (6) (BHR)
(52) Summary of Interview of (b) (6) (BHR)
(53) NCIS Interview of (b) (6) (BHR)
(54) Bureau of Alcohol, Tobacco, Firearms and Explosives Interview of (b) (6) (BHR)
(55) Summary of Interview of (b) (6) (BHR)
(56) Summary of Interview of (b) (6) (BHR)
(57) NCIS First Interview of (b) (6) (BHR)
(58) NCIS Interview of (b) (6) (BHR)
(59) Photo Depiction of SCBA Bottles on Pier on 12 Jul 20 [IMG 4614]
(60) NCIS Interview of (b) (6) (BHR) [Disk]
(61) Summary of First Interview of (b) (6) (BHR)
(62) Summary of Second Interview of (b) (6) (BHR)
(63) Summary of Interview of (b) (6) (BHR)
(64) Summary of Interview of (b) (6) (BHR)
(65) Summary of Interview of (b) (6) (BHR)
(66) NCIS Interview of (b) (6) (BHR)
(67) Summary of Interview of (b) (6) (BHR)
(68) Summary of Interview of (b) (6) (BHR)
(69) Photo Depiction of USS BONHOMME RICHARD Damage Control Plates of 18 Jul 20 [DSC 1013]
(70) Summary of Interview of (b) (6) (BHR)
(71) Summary of Interview of (b) (6) (FTZ)
(72) Summary of Interview of RDML Sobeck, Philip (ESG-3)
(73) Summary of Interview of (b) (6) (RSL)
(74) Summary of Interview of (b) (6) (FTZ)
(75) USS RUSSELL Deck Log of 12 Jul 20

(76) Summary of Interview of (b) (6) (RSL)
(77) Summary of Interview of (b) (6) (BHR)
(78) USS FITZGERALD Deck Log of 12 Jul 20
(79) Summary of Interview of (b) (6) (FRE)
(80) Summary of Interview of (b) (6) (FTZ)
(81) Summary of Interview of [redacted] (BHR)
(82) Summary of Interview of CAPT Thoroman, Gregory (BHR)
(83) Summary of Interview of (b) (6) (BHR)
(84) NCIS Interview of (b) (6) (BHR)
(85) Summary of Interview of (b) (6) (BHR)
(86) Summary of Interview of (b) (6) (BHR)
(87) Summary of Interview of (b) (6) (BHR)
(88) Photo Depiction of USS BONHOMME RICHARD Sailors Dressing out in Hangar [IMG 4447]
(89) Summary of Interview of (b) (6) (BHR)
(90) Summary of Interview of (b) (6) (BHR)
(91) Summary of Interview of (b) (6) (BHR)
(92) NCIS Interview with (b) (6) (BHR)
(93) Summary of Interview of (b) (6) (BHR)
(94) NCIS Second Interview of (b) (6) (BHR)
(95) Summary of Interview of (b) (6) (BHR)
(96) Photo Depiction of Duty Fire Marshall and (b) (6) on 12 Jul 20
(97) Summary of Interview of (b) (6) (BHR)
(98) Summary of Interview of (b) (6) (BHR)
(99) USS BONHOMME RICHARD Engineering Log of 1 Jul 20 to 19 Jul 20
(100) NCIS Interview of (b) (6) (BHR)
(101) Summary of Interview of (b) (6) (BHR)
(102) Summary of Interview of (b) (6) (BHR)
(103) Summary of Interview of (b) (6) (BHR)
(104) Summary of Interview of (b) (6) (BHR)
(105) Summary of Interview of (b) (6) (BHR)
(106) NCIS Telephonic Screening Interviews of 27 Jul 20
(107) NCIS Walkthrough Interview of (b) (6) (BHR)
(108) NCIS Second Interview of (b) (6) (BHR)
(109) NCISInterview of (b) (6) (BHR)
(110) Summary of Interview of (b) (6) (BHR)
(111) Summary of Interview of (b) (6) (BHR)
(112) CNSF Fire Safety Assessment Program Report of 23 Nov 20
(113) CNSF Fire Safety Assessment Program Report of 27 Oct 20
(114) USS BONHOMME RICHARD Fire Safety Watch Training Minutes of 23 Jan 20
(115) NCIS Interview of (b) (6) (BHR)

(116) Fires And Flooding Devastated The Amphibious Assault Ship USS Bonhomme Richard, U.S. Navy's Top Officer Reveals, Business Insider, 22 Jul 20 [Media]
(117) Summary of Interview of (b) (6) (SWRMC)
(118) Summary of Interview of (b) (6) (BHR)
(119) Summary of Interview of (b) (6) (BHR)
(120) Summary of Interview of (b) (6) (BHR)
(121) Summary of Interview of (BHR)
(122) Summary of Interview of (b) (6) (BHR)
(123) Summary of Interview of (b) (6) (BHR)
(124) Summary of Interview of (b) (6) (BHR)
(125) Summary of Interview of (b) (6) (BHR)
(126) USS BONHOMME RICHARD Audio Visual Files Depicting Events on or after 12 July 2020
(127) USS BONHOMME RICHARD Damage Control Plates 1-4
(128) Photo Depiction 1 of 2 USS BONHOMME RICHARD Lower V on 31 Aug 20 [JPG 1110]
(129) Photo Depiction 2 of 2 USS BONHOMME RICHARD Lower V on 31 Aug 20 [JPG 1111]
(130) Summary of Interview of (b) (6) (BHR)
(131) Summary of Interview of (b) (6) (BHR)
(132) Summary of Interview of (b) (6) (RSL)
(133) Summary of Interview of (b) (6) (RSL)
(134) Summary of Interview of (b) (6) (RSL)
(135) Summary of Interview of (b) (6) (RSL)
(136) Summary of Interview of (b) (6) (RSL)
(137) Summary of Interview of (b) (6) (RSL)
(138) Summary of Interview of (b) (6) (CNRSW)
(139) USS BONHOMME RICHARD CAD Police Event Log (Part 1)
(140) Fire Incident CMD 2 Channel (Part 1) of 12 Jul 20 [Audio]
(141) USS BONHOMME RICHARD CAD Police Event Log (Part 1)
(142) ESG-3 USS BONHOMME RICHARD Fire Overview of 12 Jul 20 to 16 Jul 20
(143) Summary of Interview of (b) (6) (NBSD)
(144) Summary of Interview of (b) (6) (NBSD)
(145) Regional Dispatch Center Phone Call to NBSD ATTWO of 7 Jul 20
(146) Region Operation Center Bridge Watch Team Timeline of BHR Major Fire of 12 Jul 20
(147) NBSD Urgent Notice - Fire Onboard USS BONHOMME RICHARD of 12 Jul 20
(148) Fire Incident TAC 2 Channel (Part 1) of 12 Jul 20 [Audio]
(149) Summary of Interview of (b) (6) (FEDFIRE)
(150) Photo Depiction of USS BONHOMME RICHARD Deck Log of 12 Jul 20 [JPG 002]
(151) Summary of Interview of (b) (6) (NBSD)
(152) Summary of Interview of (b) (6) (FEDFIRE)
(153) Summary of Interview of (b) (6) (FEDFIRE)

(154) Photo Depiction 2 of 2 of Connection to Riser [PNG 002]
(155) Photo Depiction 1 of 2 of Connection to Riser [PNG 001]
(156) Summary of Interview of (b) (6) (FEDFIRE)
(157) Summary of Interview of (b) (6) (FEDFIRE)
(158) Summary of Interview of (b) (6) (FEDFIRE)
(159) Summary of Interview of (b) (6) (FEDFIRE)
(160) Summary of Interview of (b) (6) (FEDFIRE)
(161) Summary of Interview of (b) (6) (FEDFIRE)
(162) SDFD Helmet Camera Footage 0930 to 0945 Local Time on 12 Jul 20
(163) Summary of Interview of (b) (6) (FEDFIRE)
(164) Summary of Interview of (b) (6) (FEDFIRE)
(165) Summary of Interview of (b) (6) (FedFire)
(166) SDFD Helmet Camera Footage 0900 to 0915 Local Time on 12 Jul 20
(167) Summary of Interview of (b) (6) (BHR)
(168) Summary of Interview of (b) (6) (BHR)
(169) Summary of Interview of (b) (6) (BHR)
(170) Summary of Interview of (b) (6) (BHR)
(171) Summary of Interview of (b) (6) (BHR)
(172) Summary of Interview of (b) (6) (BHR)
(173) Summary of Interview of (b) (6) (BHR)
(174) Summary of Interview of (b) (6) (BHR)
(175) Summary of Interview of (b) (6) (FEDFIRE)
(176) Summary of First Interview of SDFD Personnel (SDFD)
(177) SDFD Incident Report of BHR Fire of 12 Jul 20
(178) 21 Injured After an Explosion and Fire on a Naval Ship in San Diego, CNN, 12 Jul 20 [Media]
(179) USS BONHOMME RICHARD Deck Log of 10 Jul 20 to 13 Jul 20
(180) USS BONHOMME RICHARD CAD Police Event Log (Part 3)
(181) Summary of Second Interview of SDFD Personnel (SDFD)
(182) Summary of Interview of (b) (6) (CNRSW)
(183) Summary of Third Interview of SDFD Personnel (SDFD)
(184) CNRSW Interoperability Radio Patching Policy
(185) SDFD Helmet Camera Footage 0915 to 0930 Local Time on 12 Jul 20
(186) Photo Depiction of USS BONHOMME RICHARD Fire Response on 12 Jul 20 [IMG 4488]
(187) Summary of Interview of (b) (6) (BXR)
(188) Summary of Interview of (b) (6) (FEDFIRE)
(189) Summary of Interview of (b) (6) (FEDFIRE)
(190) Summary of Interview of (b) (6) (SWRMC)
(191) Summary of Interview of (b) (6) (NAVSEA)
(192) Summary of Interview of (b) (6) (BHR)
(193) Summary of Interview of (b) (6) (FEDFIRE)

(194) Summary of Interview of (b) (6) (BHR)
(195) Summary of Interview of (b) (6) (RSL)
(196) USS BONHOMME RICHARD Sworn Statements for Command Awards
(197) Summary of Interview of (b) (6) (BHR)
(198) Summary of Interview of (b) (6) (BHR)
(199) Summary of Interview of (b) (6) (BHR)
(200) Summary of Interview of (b) (6) (BHR)
(201) Summary of Interview of (b) (6) (BHR)
(202) Summary of Interview of (b) (6) (PHIBRON-5)
(203) Summary of Interview of (b) (6) (BHR)
(204) Summary of Interview of (b) (6) (BHR)
(205) NCIS Interview of (b) (6) (BHR)
(206) Summary of Interview of (b) (6) (BHR)
(207) NBSD Shore Power Loads of 12 Jul 20
(208) USS BONHOMME RICHARD Station B NAVSTA 12KV Loads
(209) Summary of Interview of (b) (6) (NAVFAC)
(210) Email from (b) (6) (NBSD) of 041036U AUG 20
(211) Naval Base San Diego Pier 2 NASSCO Industrial Load of 12 Jul 20
(212) Email from (b) (6) (NBSD) of 281224U JUL 20
(213) Summary of Interview of (b) (6) (NAVFAC)
(214) Summary of Interview of (b) (6) (BHR)
(215) USS BONHOMME RICHARD Power Timeline of 12 Jul 20
(216) Summary of Interview of (b) (6) (BHR)
(217) Summary of Interview of (b) (6) (NAVFAC)
(218) NCIS Interview of (b) (6) (BHR)
(219) Summary of Interview of (b) (6) (BHR)
(220) Summary of Interview of (b) (6) (NASSCO)
(221) Summary of Interview of (b) (6) (NASSCO)
(222) SDFD Helmet Camera Footage 0945 to 1000 Local Time on 12 Jul 20
(223) Photo Depiction of Lemoore FEDFIRE on 12 Jul 20 [IMG 4568]
(224) Memorandum for the Record - Phone Call with (b) (6) Concerning his Involvement with USS BONHOMME RICHARD of 24 Nov 20
(225) USS BONHOMME RICHARD Helmet Camera Footage 0943 Local Time on 12 Jul 20
(226) Photo Depiction of FEDFIRE and BHR Personnel on 12 Jul 20 [IMG 4553]
(227) Photo Depiction of FEDFIRE Response Team on 12 Jul 20 [IMG 4499]
(228) Photo Depiction of FEDFIRE and BHR Personnel on 12 Jul 20 [IMG 4552]
(229) Summary of Interview of (b) (6) (FEDFIRE)
(230) USS BONHOMME RICHARD CAD Police Event Log (Part 2)
(231) Photo Depiction of FEDFIRE Personnel and (b) (6) entering ship via SDFD Truck 17 Ladder on 12 Jul 20 [DSC 06842]
(232) Photo Depiction of FEDFIRE Personnel and (b) (6) entering ship via SDFD Truck 17 Ladder on 12 Jul 20 [DSC 06841]

(233) Photo Depiction of SDFD Truck 11 Ladder on 12 Jul 20 [DSC 06820]
(234) Photo Depiction of FEDFIRE and SDFD Personnel on 12 Jul 20 [DSC 06819]
(235) Photo Depiction of SDFD and BHR Personnel Assembling Rescue Teams on 12 Jul 20 [IMG 4560]
(236) Summary of Interview of (b) (6) (NASSCO)
(237) Summary of Interview of (b) (6) (SWRMC)
(238) USS BONHOMME RICHARD Timeline of Events of 12 Jul 20
(239) USS BONHOMME RICHARD Helmet Camera Footage 1035 Local Time on 12 Jul 20
(240) CNRSWINST 3440.1B Regional Emergency Management Plan
(241) USS RUSSELL Engineering Log of 12 Jul 20 to 13 Jul 20
(242) Summary of Interview of (b) (6) (BHR)
(243) Summary of Second Interview of (b) (6) (BHR)
(244) Summary of Interview of (b) (6) (BHR)
(245) Summary of Interview of (b) (6) (BHR)
(246) SCADA Logs and Summary of Fire Activity of Chris Eaton
(247) Summary of Interview of (b) (6) (BHR)
(248) Summary of Interview of (b) (6) (RSL)
(249) NAVSEA Regional Maintenance Center ECC Deck Log of 14 Jul 20
(250) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 12 Jul 20 [JPG 120720]
(251) USS BONHOMME RICHARD Safety Officer Unofficial Deck Log of 12 Jul 20
(252) Photo Depiction of USS BONHOMME RICHARD Ship Fire of 12 Jul 20 [DSC 06873]
(253) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 13 Jul 20 [JPG 130720]
(254) Naval Base San Diego Daily C4I Log (Part 1 of 7) of 13 Jul 20
(255) Summary of Interview of (b) (6) (SWRMC)
(256) Summary of Interview of (b) (6) (BHR)
(257) Summary of Interview of (b) (6) (FEDFIRE)
(258) Photo Depiction of Nozzle Spray into Upper V from Sideport Door on 12 Jul 20 [IMG 3253]
(259) Summary of Interview of (b) (6) (BHR)
(260) Summary of Interview of (b) (6) (BHR)
(261) Summary of Interview of (b) (6) (BHR)
(262) Summary of Interview of (b) (6) (BHR)
(263) Summary of Interview of (b) (6) (BHR)
(264) Summary of Interview of (b) (6) (BHR)
(265) Summary of Interview of (b) (6) (FEDFIRE)
(266) Fire Incident CMD 2 Channel (Part 2) [Audio]
(267) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06870]
(268) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06866]
(269) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06876]
(270) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06881]

(271) USS BONHOMME RICHARD Deck Log Notes of 20 Jul 20 [JPG 200720]
(272) ESG-3 USS BONHOMME RICHARD Fire Presentation of 14 Jul 20
(273) Summary of Interview of (b) (6) (BXR)
(274) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [IMG 4570]
(275) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06887]
(276) Summary of Interview of (b) (6) (RSL)
(277) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06880]
(278) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [JPG 1044]
(279) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06862]
(280) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06889]
(281) Photo Depiction of San Diego Harbor Police Boats on 12 Jul 20 [DSC 06860]
(282) USS BONHOMME RICHARD CAD Police Event Log (Part 1)
(283) Photo Depiction of HSC-3 Helo Water Drop at 2122 Local Time on 13 Jul 20 [DSC 06935]
(284) Photo Depiction of Aerial Imagery Illustrating Firefighting Progress on 13-14 Jul 20 [IMG 1993]
(285) Email from (b) (6) (NAVSEA) of 141256U JUL 20
(286) Email from (b) (6) (NAVSEA) of 150401U JUL 20
(287) Email from (b) (6) (NAVSEA) of 151226U JUL 20
(288) Email from (b) (6) (NMCC) of 141212U JUL 20
(289) USS BONHOMME RICHARD Updated Navy Blue Message from ESG-3 of O 151448Z JUL 20
(290) "All Fires on the Bonhomme Richard Are Now Out, Navy Says," Military.com, 16 Jul 20 [Media]
(291) Email from RDML Eric VerHage (NAVSEA) of 122128U JUL 20
(292) Email from NAVSEA CDO of 121748U JUL 20
(293) Summary of Interview of (b) (6) (SWRMC)
(294) Summary of Interview of (b) (6) (BHR)
(295) Timeline of USS BONHOMME RICHARD Fire from (b) (6) (SWRMC)
(296) Photo Depiction of USS BONHOMME RICHARD Deck Log of 12 Jul 20 [JPG 001]
(297) Naval Base San Diego Daily C4I Log (Part 2 of 7) of 13 Jul 20
(298) Summary of Interview of (b) (6) (FEDFIRE)
(299) Summary of Interview of (b) (6) (CNSP)
(300) Summary of Interview of (b) (6) (NAVFAC)
(301) USS BONHOMME RICHARD CAD Police Event Log (Part 3)
(302) Summary of Interview of (b) (6) (BHR)
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(304) Summary of Interview of (b) (6) (NBSD)
(305) Summary of Interview of (b) (6) (BHR)
(306) USS BONHOMME RICHARD Incident Action Plan of 12 Jul 20
(307) Summary of Interview of (b) (5) (PHIBRON-5)
(308) Summary of Interview of (b) (6) (FEDFIRE)

(309) Summary of Interview of (b) (6) (SWRMC)
(310) Summary of Interview of (b) (6) (FEDFIRE)
(311) Summary of Interview of (b) (6) (CNSP)
(312) Summary of Interview of (b) (6) (NBSD)
(313) Summary of Interview of (b) (6) (NAVFAC)
(314) Summary of Interview of CAPT Nieswiadomy, Mark (NBSD)
(315) Summary of Interview of (b) (6) (NBSD)
(316) Summary of Interview of (b) (6) (NAVSEA)
(317) Summary of Interview of (b) (6) (SWRMC)
(318) Photo Depiction of SWRMC Command Duty Officer Log of 12 Jul 20 [JPG 001]
(319) SWRMC Command Duty Officer Log of 12 Jul 20
(320) Summary of Interview of (b) (6) (NAVSEA)
(321) Summary of Interview of CAPT Hart, David (SWRMC)
(322) Summary of Interview of (b) (6) (SWRMC)
(323) Summary of Interview of (b) (6) (SWRMC)
(324) Summary of Interview of (b) (6) (SWRMC)
(325) Summary of Interview of (b) (6) (SWRMC)
(326) Summary of Interview of (b) (6) (SWRMC)
(327) Summary of Interview of (b) (6) (SWRMC)
(328) Email from (b) (6) (NAVSEA) of 140604U JUL 20
(329) Email from (b) (6) (NAVSEA) of 151533U JUL 20
(330) Email from (b) (6) (NAVSEA) of 121549U JUL 20
(331) Summary of Interview of (b) (6) (CNSP)
(332) Summary of Interview of (b) (6) (ESG-3)
(333) Summary of Interview of (b) (6) (SWRMC)
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(336) USS BONHOMME RICHARD Fuel and Water Reports of 1 May 20 to 13 Jun 20
(337) USS BONHOMME RICHARD Engineering Log of Apr 20
(338) Summary of Interview of (b) (6) (USCG)
(339) Summary of Interview of (b) (6) (BHR)
(340) Summary of Interview of (b) (6) (NAVSEA)
(341) Summary of Interview of (b) (6) (NAVSEA)
(342) NAVSEA Ship Incident Response Center LHD-1 Class Equipment & Systems - Fire Protection
(343) NAVSEA Ship Incident Response Center LHD-1 Class Equipment & Systems - Medical
(344) NAVSEA Ship Incident Response Center LHD-1 Class Equipment & Systems - Damage Control (Created 2014)
(345) NAVSEA Ship Incident Response Center LHD-1 Class Equipment & Systems - Damage Control (Updated 2015)
(346) Email from Naval Sea Systems Command Emergency Operations Center of 121411 Z JUL 20

(347) Summary of Interview of (b) (6) (NAVSEA)
(348) Summary of Interview of (b) (6) (CNRSW)
(349) Summary of Interview of (b) (6) (CNRSW)
(350) Summary of Interview of VADM Lindsey, Yancy (CNIC)
(351) Summary of Interview of (b) (6) (RSL)
(352) NSBD Navy Blue Message of Z 122023Z JUL 20
(353) Email from RDML Eric H. VerHage (CNRMC) of 150527U JUL 20
(354) Summary of Interview of (b) (6) (NAVFAC)
(355) Summary of Interview of (b) (6) (NAVFAC)
(356) Summary of Interview of (b) (6) (NAVFAC)
(357) Summary of Interview of (b) (6) (NAVFAC)
(358) Email from (b) (6) (NAVFAC) of 291203U SEP 20
(359) Summary of Interview of (b) (6) (NAVFAC)
(360) Summary of Interview of (b) (6) (RSL)
(361) Summary of Interview of (b) (6) (SWRMC)
(362) SDFD Rescue Drill Manual Chapter 3 of Dec 18
(363) Summary of Interview of (b) (6) (FEDFIRE)
(364) CNRSW Commanders Update Brief on USS BONHOMME RICHARD Fire
(365) Summary of Interview of (b) (6) (SHO)
(366) Summary of Interview of (b) (6) (SHO)
(367) Summary of Interview of (b) (6) (BHR)
(368) Summary of Interview of (b) (6) (KSC)
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(375) Summary of Interview of (b) (6) , Jeruel (BHR)
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(377) Summary of Interview of (b) (6) (BXR)
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(379) USS BONHOMME RICHARD Deck Log of Jan 20
(380) Summary of Interview of (b) (6) (BHR)
(381) NAVSEA Brief from Ship Incident Response Center of 14 Jul 20
(382) USS BONHOMME RICHARD Fire Timeline and Commanding Officer Priorities
(383) USS BONHOMME RICHARD Deck Log (Part 4) of 12 Jul 20
(384) USS BONHOMME RICHARD Timeline Photo Report of 12 Jul 20
(385) CNRSW Chronological Incident Report of USS BONHOMME RICHARD Fire
(386) USS BONHOMME RICHARD Deck Log (Part 3) of 12 Jul 20
(387) SWRMC Statement of Work Section (Fire Safety) of 10 Jul 17
(388) Photo Depiction of USS BONHOMME RICHARD Fire of 12 Jul 20 [IMG 4581]

(389) "Firefighting Teams Briefly Removed from Bonhomme Richard Amid 'Shift in the Ship's List,'" Navy Times, 16 Jul 20 [Media
(390) "Navy Fights Fire From the Air after Explosion aboard USS Bonhomme Richard," Seapower Magazine, 13 Jul 20 [Media]
(391) Summary of Interview of (b) (6) (HSC-3)
(392) Email from (b) (6) (NAVSEA) of 140951U JUL 20
(393) Summary of Interview of (b) (6) (HSC-3)
(394) Summary of Interview of USFP Personnel (USFP)
(395) HSC-3 Crews List and Flight Information for Firefighting
(396) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 12 Jul 20 [JPG 120720]
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(398) ECC and ENC Top Watch Notes of 13 Jul 20
(399) SWRMC Environmental, Safety and Health Bridgeline Handwritten Notes
(400) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 13 Jul 20 [JPG 130720]
(401) Summary of Interview of (b) (6) (FEDFIRE)
(402) Email from NAVSEA CDO of 130411U JUL 20
(403) Email from (b) (6) (NAVSEA) of 131526U JUL 20
(404) Summary of Interview of (b) (6) (SWRMC)
(405) Summary of Interview of (b) (6) (NAVSEA)
(406) Summary of Interview of (b) (6) (GPC)
(407) SWRMC Top Watch Notes of 13 Jul 20
(408) Summary of Interview of (b) (6) (BHR)
(409) SWRMC Code 900 ERC Top Watch Notes of 14-19 Jul 20
(410) Email from (b) (6) (NAVSEA) of 140413U JUL 20
(411) NBSD Daily C4I Log (Part 4 of 7) of 15 Jul 20
(412) Email from (b) (6) (NAVSEA) of 151534U JUL 20
(413) NBSD Daily C4I Log (Part 5 of 7) of 15 Jul 20
(414) Summary of Interview of (b) (6) (ESG-3)
(415) Summary of Second Interview of (b) (6) (BHR)
(416) USS BONHOMME RICHARD Compartment Lists and NAVSEA Engineering Assessment Plan (Part 1)
(417) USS BONHOMME RICHARD Compartment List and NAVSEA Engineering Assessment Plan (Part 2)
(418) Summary of Interview of (b) (6) (BHR)
(419) Summary of Interview of (b) (6) (FEDFIRE)
(420) SWRMC Watch Notes of 14 Jul 20
(421) Email from (b) (6) (NAVSEA) of 151953U JUL 20
(422) USS BONHOMME RICHARD Incident Detail Report of 12-17 Jul 20
(423) Email from (b) (6) (NAVSEA) of 240839U JUL 20
(424) Email from (b) (6) (NAVSEA) of 171943U JUL 20

(425) Summary of Interview of (b) (6) (BHR)
(426) SWRMC ECC Watchbill Notes of 17 Jul 20
(427) Summary of Interview of (b) (6) (JPM)
(428) PHIBRON-5 EOC Notes on BHR Firefighting Efforts of 19 Jul 20
(429) PHIBRON-5 EOC Notes on BHR Firefighting Efforts of 21 Jul 20
(430) SWRMC Handwritten Notes of 15 Jul 20
(431) Summary of Interview of (b) (6) (BHR)
(432) USS BONHOMME RICHARD Deck Log (Part 6) of 16 Jul 20
(433) USS BONHOMME RICHARD Deck Log (Part 3) of 15 Jul 20
(434) SWRMC ECC Notes of 15 Jul 20
(435) USS BONHOMME RICHARD Commanding Officer Priorities List of 16 Jul 20
(436) "USS Bonhomme Richard Fire Extinguished; CO Thanks Crew For 'Strength and Resilience,'" USNI News, 16 Jul 20 [Media
(437) Handwritten Phone Talker Notes for SWRMC and USS KANSAS CITY
(438) Email from (b) (6) (NAVSEA) of 171231U JUL 20
(439) Summary of Interview of (b) (6) (SWRMC)
(440) Summary of Interview of (b) (6) (SWRMC)
(441) USS BONHOMME RICHARD Deck Log (Part 1) of 13 Jul 20
(442) Email from (b) (6) (NAVSEA) of 131300U Jul 20
(443) Summary of Interview of (b) (6) (BHR)
(444) SWRMC (Code 900) Watch Notes of 13 Jul 20
(445) SWRMC Notes on Fires, Floods, Structure, Stability of 14 Jul 20
(446) Summary of Interview of (b) (6) (BHR)
(447) Email from (b) (6) (SWRMC) of 161204U JUL 20
(448) Email from (b) (6) (NAVSEA) of 161151U JUL 20
(449) Email from (b) (6) (SWRMC) of 161428U JUL 20
(450) "'All Known Fires' Out Aboard Bonhomme Richard, Admiral Says," NAVY TIMES, 16 Jul 20 [Media]
(451) Naval Base San Diego Daily C4I Log (Part 7 of 7) of 15 Jul 20
(452) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 21 Jul 20 [JPG 001]
(453) Summary of Interview of (b) (6) (NCFD)
(454) Summary of Interview of (b) (6) (RSL)
(455) Summary of Interview of (b) (6) (FEDFIRE)
(456) Base Operations Center Daily Brief of 12 Jul 20
(457) Summary of Interview of (b) (6) (BHR)
(458) Summary of Interview of CAPT Rodriguez, Tony (PHIBRON-5)
(459) Summary of Interview of (b) (6) (PHIBRON-5)
(460) Summary of Interview of (b) (6) (CNSP)
(461) ESG-3 Subordinate Command ISIC Shift Recommendation of R061912Z MAR 20
(462) PHIBRON FIVE ISIC Shift of BHR to PHIBRON FIVE of P122149Z MAR 20
(463) Summary of Interview of RDML Ver Hage, Eric (CNRMC)

(464) Summary of Interview of (b) (6) (CNSP)
(465) Summary of Interview of (b) (6) (CNRMC)
(466) COMNAVREGSWINST 5450.4 Mission, Functions and Tasks of Naval Base San Diego of 12 Sep 19
(467) U.S. Navy Regulations, Chapter 8
(468) Coordination Comments and Input on Development of OPNAVINST 3440.18 (Action Officer Review
(469) CNICINST 3440.17 V1 Sec 4 Navy Installation Emergency Management Program Manual of 23 Jan 06
(470) Summary of Interview of VADM Galinis, William (NAVSEA)
(471) Summary of Interview of RDML Bolivar, Bette (CNRSW)
(472) U.S. Fleet Forces (N43) Response to Request for Information Ltr 5830 N01/007 of 3 Sep 20
(473) U.S. Pacific Fleet (N43) Response to Request for Information Ltr 5830 N43/1098 of 11 Sep 20
(474) SWRMCINST 5100.11C Fire Response Plan of 31 Jan 20
(475) Summary of Interview of (b) (6) (SWRMC)
(476) NASSCO-NAVSEA Solicitation, Offer and Award Contract for FY18 USS BONHOMME RICHARD DPMA Availability of 19 Dec 17
(477) USS BONHOMME RICHARD Emergency Department Practice Management Association FY18 Weekly Production Meeting Week 88 of Availability of 6-12 Jul 20
(478) Amendment of Solicitation/Modification of Contract of 13 Jun 19
(479) Amendment of Solicitation/Modification of Contract of 7 Nov 19
(480) Summary of Interview of (b) (6) (SWRMC)
(481) Summary of Interview of RDML Brown, Scott (CPF)
(482) Summary of Second Interview of (b) (6) (BHR)
(483) Summary of First Interview of (b) (6) (BHR)
(484) Summary of Interview of (b) (6) (BHR)
(485) Summary of Interview of (b) (6) (BHR)
(486) Summary of Interview of (b) (6) (BHR)
(487) USS BONHOMME RICHARD NTP 8010 Brow Requirement Deviation of 29 Jan 20
(488) DD Form 1348-1A Shipment Receipt Document for United States Munitions List Items of 27 Jul 20
(489) Summary of Interview of (b) (6) (BHR)
(490) Summary of Interview of (b) (6) (BHR)
(491) Handwritten Statement from Unknown BONHOMME RICHARD Sailor
(492) BHR List of All Spaces Onboard Organized by Responsible Work Center
(493) Summary of Interview of (b) (6) (BHR)
(494) NCIS Second Interview of (b) (6) (BHR)
(495) Summary of Interview of (b) (6) (BHR)
(496) Summary of First Interview of (b) (6) (BHR)
(497) USS BONHOMME RICHARD Quick Reference Zone Inspector Sheet

(498) Summary of Interview of (b) (6) (BHR)
(499) Summary of Interview of (b) (6) (BHR)
(500) USS BONHOMME RICHARD Zone Inspection Related Information of 24 Aug 20
(501) Summary of Interview of (b) (6) (BHR)
(502) USS BONHOMME RICHARD Deck Department Zone Inspection List
(503) USS BONHOMME RICHARD Zone Inspection Plan of 2020
(504) USS BONHOMME RICHARD Week 6 Zone Roster
(505) USS BONHOMME RICHARD Deck Dept 8 O'Clock Reports of 20 May 20
(506) NASSCO USS BONHOMME RICHARD FY18 DPMA System Restoration of 29 Jun 20
(507) USS BONHOMME RICHARD Engineering Log of May 20
(508) USS BONHOMME RICHARD Engineering Log of Jun 20
(509) Photo Depiction of USS BONHOMME RICHARD Deck Log of 10-11 Jul 20 [JPG 001]
(510) USS BONHOMME RICHARD Deck Log (Part 1) of 10-17 Jul 20
(511) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 10-11 Jul 20 [JPG 1007201]
(512) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 10-11 Jul 20 [JPG 1007202]
(513) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 10-11 Jul 20 [JPG 1007203]
(514) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 12 Jul 20 [JPG 1207201]
(515) USS BONHOMME RICHARD Deck Log of 18-23 Jul 20
(516) Photo Depiction of USS BONHOMME RICHARD Deck Log Notes of 12 Jul 20 [JPG 1207202]
(517) USS BONHOMME RICHARD Damage Control Logs and Diagrams
(518) USS BONHOMME RICHARD Engineering Dept 8 O'Clock Reports of 18 May 20
(519) Summary of Interview of (b) (6) (SWRMC)
(520) USS BONHOMME RICHARD Active Departure from Specification List
(521) USS BONHOMME RICHARD DPMA Situation Report 088
(522) 8010 Fire Safety Council Meeting Minutes on Temporary Firemain Inspection, Operation, Care and Testing of 12 Feb 19
(523) 8010 Fire Safety Council Meeting Minutes on Temporary Firemain Concerns for Undocking and Return to NBSD of 17 Dec 19
(524) Email from (b) (6) (NBSD) of 210837U NOV 19
(525) NASSCO Rental Return Worksheet ICO National Steel Shipbuilding Co. of 3 Jan 20
(526) USS BONHOMME RICHARD Engineering Log of Dec 19
(527) NASSCO Description of Temporary Firemain Configuration During Transit to NBSD
(528) Email from (b) (6) (SWRMC) of 211408U DEC 19
(529) Index Responses from SWRMC Request for Information Ltr N00/126 of 24 Nov 20
(530) Summary of Third Interview of (b) (6) (BHR)
(531) Summary of First Interview of (b) (6) (BHR)

(532) 8010 Fire Safety Council Meeting Minutes on Firemain and Hot Work Restoration of 6 Jan 20
(533) 8010 Fire Safety Council Meeting Minutes USS BONHOMME RICHARD on Fire Main and Hot Work Restoration of 6 Jan 20
(534) USS BONHOMME RICHARD DPMA Situation Report 083
(535) USS BONHOMME RICHARD Damage Control Central Log of 12 Jul 20
(536) USS BONHOMME RICHARD Ship Information Book Rev. 5 Vol. 2 Pt. 2 Machinery Plant: Auxiliary Machinery, Piping, Air Conditioning, Ventilation and Heating Systems Chapter 12 of 31 Jul 16
(537) USS BONHOMME RICHARD Inactive Equipment Maintenance Report
(538) NCIS Interview of (b) (6) (BHR) [Disk]
(539) Summary of Interview of (b) (6) (BHR)
(540) NCIS Interview of (b) (6) (BHR) on 21 Jul 20
(541) Accomplished Preventative (SKED) Maintenance for ER09 of 28 Oct 20
(542) NCIS Interview of (b) (6) (SWRMC)
(543) NCIS Interview of (b) (6) (BHR)
(544) NCIS Results of Interview of (b) (6) (BHR)
(545) NAVSEA Selected Record Drawing of AFFF, CO2 and Dry Chemical System Diagram
(546) USS BONHOMME RICHARD Ship Information Book Rev. 3 Vol. 2 Pt. 2, Machinery Plant: Auxiliary Machinery, Piping, Air Conditioning, Ventilation, and Heating Systems Chpaters 27-34 of 15 Aug 14
(547) 8010 Fire Safety Council Meeting Minutes on Fuel Load of 7 Apr 20
(548) Summary of Interview of (b) (6) (PHIBRON-5)
(549) Accomplished Preventative (SKED) Maintenance for ER04 Division of 28 Oct 20
(550) Summary of Interview of (b) (6) (BHR)
(551) USS BONHOMME RICHARD Current Ship's Maintenance Project
(552) NCIS Interview of (b) (6) (BHR)
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(554) Summary of Interview of (b) (6) (BHR)
(555) (b) (6) Navy and Marine Corps Achievement Medal of 18 Nov 20
(556) Navy and Marine Corps Achievement Medal ICO (b) (6) (BHR)
(557) Summary of Interview of (b) (6) (BHR)
(558) Summary of Interview of (b) (6) (BHR)
(559) Summary of Interview of (b) (6) (BHR)
(560) Summary of Interview of (b) (6) (BHR)
(561) Summary of Interview of (b) (6) (BHR)
(562) Summary of Interview of (b) (6) (BHR)
(563) Summary of Interview of (b) (6) (BHR)
(564) Summary of Interview of (b) (6) (BHR)
(565) Summary of Interview of (b) (6) (SWRMC)
(566) Summary of Interview of (b) (6) (SWRMC)
(567) FSO Designation Letter ICO (b) (6) (SWRMC) of 5 Oct 18

(568) Summary of Interview of (b) (6) (CNSP)
(569) Photo Depiction of Location of Lower V AFFF Push Buttons [JPG 26784]
(570) Photo Depiction of BHR AFFF Push Buttons [JPG 1208]
(571) Photo Depiction of BHR AFFF Push Buttons [JPG 1207]
(572) Photo Depiction of BHR AFFF Push Buttons [JPG 1206]
(573) USS BONHOMME RICHARD Command Duty Officer Job Qualification Requirements
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(575) USS BONHOMME RICHARD Interactive Damage Control Presentation
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(577) USS BONHOMME RICHARD Fire Detection System(s) of 8 Aug 19
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(584) Self Contained Breathing Apparatus Allowance Equipage List of 8 Jan 20
(585) 8010 Fire Safety Council Meeting Minutes on DCRS Layup of 8 Nov 18
(586) 8010 Fire Safety Council Meeting Minutes on Movement of 2M and 2F Repair Locker of 23 Apr 20
(587) 8010 Fire Safety Council Meeting Minutes on Brow Conditions of 12 Jun 19
(588) Email from (b) (6), NBSD Port Operations of 130930U DEC 19
(589) USS BONHOMME RICHARD Emergency Brow Shift of 15 Jan 20
(590) SWRMC SW20 FMAA Results of 27 Jan 20
(591) 8010 Fire Safety Council Meeting Minutes USS BONHOMME RICHARD - Temporary Quarterdeck Shift of 28 May 20
(592) Summary of Interview of (b) (6) (BHR)
(593) 8010 Fire Safety Council Meeting Minutes on NTP 8010 Brow Requirement Deviation of 29 Jan 20
(594) USS BONHOMME RICHARD Egress Brow and Quarterdeck Movement of 8 Jul 20
(595) 8010 Fire Safety Council Meeting Minutes on Egress Brow and Quarterdeck Movement of 8 Jul 20
(596) Summary of Interview of (b) (6) (NAVSEA)
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(598) NCIS Interview of (b) (6) (BHR)
(599) NCIS Interview of (b) (6) (BHR)
(600) NCIS Interview of (b) (6) (BHR)
(601) NCIS Results of Interview of (b) (6) (BHR)
(602) NCIS Interview with (b) (6) (BHR)
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(604) Diagram of USS BONHOMME RICHARD Lower V

(605) NCIS Interview of (b) (6) (NAVSEA)
(606) Summary of Interview of (b) (6) (BHR)
(607) BHRINST 3100.2C Commanding Officer's Standing Orders of 16 Mar 20
(608) NCIS Verbal Update from (b) (6) (NAVSEA)
(609) Summary of Interview of (b) (6) (BHR)
(610) Fire Safety Council Assignment Memorandum for USS BONHOMME RICHARD FY18 DPMA of 5 Oct 18
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(612) 8010 Fire Safety Council Meeting Minutes on Temporary Firemain of 12 Feb 19
(613) Summary of Interview of (b) (6) (SWRMC)
(614) 8010 Fire Safety Council Meeting Minutes on Temporary Fireman Inspection, Operation, Care, and Testing of 12 Feb 19
(615) Summary of Interview of (b) (6) (SWRMC)
(616) Fire Safety Council (FSC) Assignment Memorandum for USS BONHOMME RICHARD FY19 DPMA of 10 Oct 18
(617) Summary of Interview of (b) (6) (SWRMC)
(618) Summary of Interview of (b) (6) (SWRMC)
(619) (b) (6) Designation as SWRMC Fire Safety Officer for the USS BONHOMME RICHARD of 17 Jun 19
(620) Command Fire Safety Officer Written and Oral Exam for (b) (6) of 24 Sep 19
(621) Fire Safety Council Assignment Memorandum for USS BONHOMME RICHARD FY18 Data Processing Management Association (DPMA) of 5 Oct 18
(622) Command Fire Safety Officer Written and Oral Exam for (b) (6) of 24 Sep 19
(623) Designation as SWRMC Fire Safety Officer for USS BONHOMME RICHARD of 2 Dec 19
(624) Regional Maintenance Center Fire Safety Officer JQR Rev 1 Feb 16
(625) NCIS Interview of (b) (6) (BHR)
(626) Fire Safety Council Assignment Memorandum for USS BONHOMME RICHARD Fiscal Year 2019 Docking Phase Maintenance Availability of 29 Oct 19
(627) 8010 Fire Safety Council Meeting Minutes on Fire Prevention, Firefighting, FZB, Safety Walkthroughs, Hotwork, Installed FM Systems, Fire Drills, F&ES, Shipyard Evolutions, Lessons Learned and Unplanned Events of 29 Oct 18
(628) Summary of Interview of (b) (6) (SWRMC)
(629) 8010 Fire Safety Council Meeting Minutes on Portable Extinguisher Removal of 8 Nov 18
(630) 8010 Fire Safety Council Meeting Minutes on Chapter 12 Fire Drill Waiver of 8 Nov 18
(631) 8010 Fire Safety Council Meeting Minutes on Portable Extinguisher Removal of 8 Nov 18
(632) 8010 Fire Safety Council Meeting Minutes on DCRS Layup of 8 Nov 18
(633) USS BONHOME RICHARD DCTT Event Brief Chapter 12 Fire Drill on 18 Dec 18
(634) 8010 Fire Safety Council Meeting Minutes on Emergency Brow Access of 23 Jan 19
(635) NAVBASESANDIEGOINST 5450.8T NBSD Information Handbook of 14 Jun 19

(636) Email from (b) (6) (NBSD) of 240636U AUG 20
(637) Email from (b) (6) (NBSD) of 240705U AUG 20
(638) USS BONHOMME RICHARD Ammo Movement of 15 Jan 20
(639) Summary of Interview of (b) (6) (SWRMC)
(640) USS BONHOMME RICHARD Plan of the Day of 10 Jul 20
(641) Summary of Interview of (b) (6) (SWRMC)
(642) USS BONHOMME RICHARD Fire Prevention and Housekeeping Report of 5 Nov 18
(643) USS BONHOMME RICHARD Walk-Through Data Hits by BHR CI Team of 14 Sep 20
(644) Summary of Interview of (b) (6) (SWRMC)
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(646) Memorandum for the Record N00/015 of 16 Oct 20
(647) NASSCO Logistics/ Removal Temp Service Plan for USS BONHOMME RICHARD of 13 Apr 20
(648) Index Responses to SWRMC Request for Information Ltr 5830 N00/076 of 27 Oct 20
(649) 8010 Fire Safety Council Meeting Minutes on Fire Detection Systems of 8 Aug 19
(650) 8010 Fire Safety Council Meeting Minutes on Portable Fire Extinguisher Displacement of 31 Jan 19
(651) 8010 Fire Safety Council Meeting Minutes on Fixed Extinguishing System Hazards of 5 Jun 19
(652) SWRMC Periodic Fire Drill Package for USS BONHOMME RICHARD of 31 Jan 19
(653) 8010 Fire Safety Council Meeting Minutes on 8010 Chapter 12 Fire Drill Schedule and Expectations of 14 Dec 18
(654) 8010 Fire Safety Council Meeting Minutes on Chapter 12 Fire Drill Schedule and Expectations of 14 Dec 18
(655) SWRMC Periodic Fire Drill Package USS BONHOMME RICHARD of 31 Jan 19
(656) SWRMC Observation Training Onboard USS BONHOMME RICHARD of 23 Jan 19
(657) 8010 Fire Safety Council Meeting Minutes on NBSD Federal Fire Department TTX of 29 Jan 19
(658) FEDFIRE Memo ICO Ship Familiarization Tour of 25 Aug 20
(659) 8010 Fire Safety Council Meeting Minutes on Temporary Firemain Hose Protection of 14 Mar 19
(660) Email from (b) (6) (SWRMC) of 171446U AUG 20
(661) Email from (b) (6) (SWRMC) of 171445U AUG 20
(662) Evaluation of USS BONHOMME RICHARD CNO Availability 8010 Periodic Fire Drill of 31 Jan 19
(663) SWRMC Evaluation of USS BONHOMME RICHARD CNO Availability 8010 Periodic Fire Drill of 31 Jan 19
(664) 8010 Fire Safety Council Meeting Minutes on Chapter 12 +180 Drill Waiver of 3 May 19
(665) USS BONHOMME RICHARD 8010 Chapter 12 Drill Evaluation Criteria of 2 Jul 19
(666) Periodic Fire Drill Package Onboard USS BONHOMME RICHARD at NASSCO San Diego Shipyard of 23 Jul 19

(667) NAVSEA 8010 Incident Command Structure Presentation
(668) 8010 Chapter 12 +180 Fire Drill Outbrief of 24 Jul 19
(669) USS BONHOMME RICHARD 8010 Chapter 12 +180 Fire Drill Evaluation and Required Corrective Actions of 24 Jul 19
(670) SWRMC Evaluation of USS BONHOMME RICHARD 8010 Chapter 12 +180 Fire Drill Evaluation and Required Corrective Actions of 24 Jul 19
(671) SWRMC Evaluation of USS BONHOMME RICHARD 8010 Chapter 12 +180 Fire Drill Evaluation and Required Corrective Actions of 24 Jul 19
(672) 8010 Fire Safety Council Meeting Minutes on 8010 Chapter 12 +180 Drill Outbrief of 24 Jul 19
(673) SWRMC Evaluation of USS BONHOMME RICHARD 8010 Chapter 12 +180 Fire Drill Evaluation and Required Corrective Actions of 24 Jul 19
(674) USS BONHOMME RICHARD Chapter 12 Drill Date and Time of 13 Nov 19
(675) 8010 Fire Safety Council Meeting Minutes on Chapter 12 Drill Date and Time of 13 Nov 19
(676) 8010 Fire Safety Council Meeting Minutes on Chapter 12 Drill Date and Time of 13 Nov 19
(677) 8010 Fire Safety Council Meeting Minutes on Movement of Chapter 12 +360 Drill Date of 20 Feb 20
(678) Email from (b) (6) (NBSD) of 050812U MAR 20
(679) USS SHOUP 8010 Chapter 12 Fire Drill of 26 Aug 20
(680) Email from (b) (6) (SWRMC) of 050709U MAR 20
(681) Email from (b) (6) (NBSD) of 161008U MAR 20
(682) Email from (b) (6) (SWRMC) of 161045U JUL 20
(683) CNIC FRAGO 002 to CNIC PLANORD for COVID-19 Response of O 192303Z MAR 20
(684) Email from (b) (6) (SWRMC) of 161047U JUL 20
(685) Email from (b) (6) (CNRSW) of 131742U OCT 20
(686) CNIC FRAGO 004 to CNIC PLANORD for COVID-19 Response O 0122117Z APR 20
(687) Summary of Interview of (b) (6) (CNIC)
(688) Reportable Fire Events Minutes of 23 Apr 20
(689) Email from (b) (6) (SWRMC) of 161045U MAR 20
(690) USS BONHOMME RICHARD Training Calendar of Events
(691) Email from (b) (6) (CNRSW) of 251714U AUG 20
(692) USS BONHOMME RICHARD MOB-D 1.4 Afloat Training Group Western Pacific End of Mission Report of 9 Dec 16
(693) Email from (b) (6) (CNSP) of 161419U DEC 16
(694) USS BONHOMME RICHARD Mission Area Certification Completion Dates
(695) ATG San Diego BHR Fleet Support Operations - Medical End of Mission Report of 15-19 Oct 18
(696) ATG San Diego BHR Mobility - Damage Control End of Mission Report of 15-19 Oct 18

(697) USS BONHOMME RICHARD Damage Control Training Team Binder
(698) USS BONHOMME RICHARD Damage Control Qualifications Sheet of 16 Sep 20
(699) USS BONHOMME RICHARD Modified Fire Drill Calendar of 10 Sep 20
(700) Command Investigation into the Fire Onboard the USS OSCAR AUSTIN of 18 Dec 18
(701) Summary of Interview of (b) (6) (BHR)
(702) USS BONHOMME RICHARD MOB-D Warfare Area Drill Scores of 14 Jan 16 to 19 Jun 20
(703) USS BONHOMME RICHARD Fire Drill Calendar
(704) Summary of Interview of (b) (6) (BHR)
(705) Commander, US Pacific Fleet Underway Checklist for COVID-19 Environment of 17 Apr 20
(706) The Half-Life of Scared - COVID-19 Message of R 070120Z APR 20
(707) Email from (b) (6) (CNSP) of 222204U APR 20
(708) USS BONHOMME RICHARD Commanding Officer's Philosophy
(709) USS BONHOMME RICHARD FLTMPS 12 Month Training Plan Outlook of 12 Aug 20
(710) USS BONHOMME RICHARD FLTMPS Required vs. Onboard Graduates
(711) USS BONHOMME RICHARD Sailors Onboard of Dec 16 and Jul 20
(712) Summary of Interview of (b) (6) (BHR)
(713) Summary of Interview of (b) (6) (BHR)
(714) Memorandum of Agreement between SWRMC and BONHOMME RICHARD - NAVSEA 8010 Applicability for Fire Prevention and Fire Response for the USS Bonhomme Richard FY19 DPMA of 17 Oct 18
(715) Memorandum of Agreement between SWRMC and BONHOMME RICHARD - NAVSEA 8010 Applicability for Fire Prevention and Fire Response for the USS Bonhomme Richard FY18 DPMA of 12 Dec 19
(716) Memorandum of Agreement NAVSEA 8010 Applicability for Fire Prevention and Fire Response for the USS BONHOMME RICHARD (LHD 6) FY18 DPMA
(717) USS BONHOMME RICHARD Fire Safety Watch Training Minutes of 29 Oct 18
(718) USS BONHOMME RICHARD Manning Summary of May 18 to Jul 20
(719) USS BONHOMME RICHARD AMS List of 13 Jul 20
(720) List of USS BONHOMME RICHARD Personnel Not on the Duty Section Roster of Aug 19 to Jul 20
(721) Active Duty Promotions to the Permanent Grades of Captain, Commander, Lieutenant Commander, Lieutenant and Chief Warrant Officers in the Line and Staff Corps of R 261919Z MAY 20
(722) Summary of Interview of (b) (6) (BHR)
(723) USS BONHOMME RICHARD BBD Alignment of 12 Jul 20
(724) OPNAVINST 3120.32D Standard Organization and Regulations of the U.S. Navy CH-1 of 15 May 17
(725) Photo Depiction of USS BONHOMME RICHARD Duty Section 5 of 8 (Page 1 of 2) of 11 Jul 20 [JPG 001]

(726) Photo Depiction of USS BONHOMME RICHARD Duty Section 5 of 8 (Page 2 of 2) of 11 Jul 20 [JPG 002]
(727) USS BONHOMME RICHARD SSDF Watchbill of 11 Jul 20
(728) USS BONHOMME RICHARD Plan of the Day of 11-12 Jul 20
(729) NBSD Gate 6 Base Access Control History Report of 11-12 Jul 20
(730) BHR Response Memo to Request for Information Ltr 5830 00/XXX of 25 Aug 20
(731) USS BONHOMME RICHARD Fire Damage Assessment Report of 1 Aug 20
(732) BHR Response Memo to Request for Information Ltr 5830 00/015 of 13 Aug 20
(733) BHR Senior Medical Officer Justification of Missing Reports Memo of 13 Aug 20
(734) BHR Response Memo to Request for Information Ltr 5830 00/028 of 18 Aug 20
(735) BHR Security Officer Response to Request for Information Memo of 21 Aug 20
(736) USS BONHOMME RICHARD Damage Control Central Log of 12 Jul 20
(737) BONHOMME RICHARD Patient Under Investigation Tracker of 1 Apr 20 to 31 Jul 20
(738) USS BONHOMME RICHARD Medical and Dental 8 O'Clock Reports of 11 Jul 20
(739) USS BONHOMME RICHARD Coronavirus Disease 2019 Impacts Ltr 1000 00/07 of 5 Aug 20
(740) Summary of Interview of (b) (6) (PHIBRON-1)
(741) Summary of Interview of VADM Kitchener, Roy (CNSP)
(742) Summary of Interview of VADM (Ret) Brown, Richard (CNSP)
(743) Summary of Interview of (b) (6) (PHIBRON-1)
(744) Summary of Interview of (b) (6) (ESG-3)
(745) Summary of Interview of (b) (6) (CNSP)
(746) Summary of Interview of (b) (6) (SWRMC)
(747) Summary of Second Interview of (b) (6) (CNSP)
(748) Summary of First Interview of (b) (6) (CNSP)
(749) 8010 Fire Safety Council Meeting Minutes USS BONHOMME RICHARD - Defueling of 27 Nov 18
(750) USS BONHOMME RICHARD Ordnance Move of 20 Nov 18
(751) Designation of Area Commands for Major Shipboard Non-Nuclear Casualties of R 192325Z DEC 20
(752) Summary of Interview of RDML Greene, William (USFFC)
(753) Email from (b) (6) (SWRMC) of 091302U APR 20
(754) Email from (b) (6) (PACFLT) of 091341U APR 20
(755) Memorandum of Agreement NAVSEA 8010 Applicability for Fire Prevention and Fire Response for the USS BONHOMME RICHARD FY19 Docking Phased Maintenance Availability of 17 Oct 18
(756) MOA between Mid-Atlantic Regional Maintenance Center and USS WASP of 12 Nov 19
(757) Summary of Interview of (b) (6) (NAVSEA)
(758) Fleet Review Panel of Surface Readness (Balisle Report) of 26 Feb 10
(759) Summary of Interview of (b) (6) (SWRMC)
(760) Email from (b) (6) (SWRMC) of 011413U MAY 18

(761) Area 106-3 Industrial Ship Safety for Fire Prevention and Response of 14 Jan 20
(762) USS MIAMI Fire Corrective Action Review and Assessment Presentation of 16 Jul 20
(763) Summary of Interview of (b) (6) (SWRMC)
(764) Summary of Interview of (b) (6) (SWRMC)
(765) Summary of Interview of (b) (6) (SWRMC)
(766) Summary of Interview of (b) (6) (SWRMC)
(767) Summary of Interview of (b) (6) (SWRMC)
(768) CNO-PSA Avail ESH-FSO Assignments of 1 Mar 19
(769) Summary of Interview of (b) (6) (SWRMC)
(770) Email from (b) (6) (SWRMC) of 151352U JAN 19
(771) Summary of Interview of (b) (6) (NBSD)
(772) SWRMC Corrective Action Request SSSD-2019-0148 of 20 Jul 20
(773) SWRMC Corrective Action Request SSSD-2020-0236 of 20 Jul 20
(774) SWRMC Corrective Action Request SSSD-2020-0272 of 20 Jul 20
(775) SWRMC Corrective Action Request SSSD-2019-0903 of 20 Jul 20
(776) Email from (b) (6) (SWRMC) of 270952U MAY 20
(777) Email from (b) (6) (SWRMC) of 070658U JAN 20
(778) Summary of Interview of (b) (6) (SWRMC)
(779) Email from (b) (6) (SWRMC) of 130837U JUL 20
(780) Email from (b) (6) (SWRMC) of 131539U JUL 20
(781) Summary of Interview of (b) (6) (NAVSEA)
(782) SWRMC POM 18 Fire Safety Officer Issue Paper - OPNAV N43 Adjudicated
(783) Consolidated POM 19 Fire Safety Officer Issue Paper
(784) Forward Deployed Regional Maintenance Center Safety Specialists POM 19 Issue Paper
(785) SERMC POM 18 Fire Safety Officer Issue Paper Rev. 2 - OPNAV N43 Adjudicated
(786) MARMC POM 18 Fire Safety Officers - OPNAV N43 Adjudicated
(787) FDRMC POM 18 Fire Safety Officer Issue Paper
(788) CNRMC POM 20 Fire Safety Officer Issue Paper
(789) Summary of Interview of (b) (6) (OPNAV)
(790) SWRMC Base Contractor Performance Assessment Report of 30 Sep 17
(791) Amendment of Solicitation/Modification of Contract of 25 Sep 19
(792) SWRMC Base Contractor Performance Assessment Report of 30 Sep 18
(793) SWRMC Index Responses to Request for Information Ltr 5830 N00/076 of 27 Oct 20
(794) Email from (b) (6) (NAVSEA) of 211725U SEP 17
(795) Email from (b) (6) (SWRMC) of 141651U JUN 17
(796) SWRMC Surface Ship Temporary Fire Protection Requirements of 4 Oct 17
(797) NAVSEA Surface Ship Temporary Fire Protection Requirements of 14 Mar 18
(798) Email from (b) (6) of 031019U JAN 19
(799) CNRMC Report on Major Fire Drill Conducted at SWRMC Ltr 470 C200/200 of 10 Aug 20
(800) SWRMC Index Responses to Request for Information Ltr 5830 N00/103 of 5 Nov 20
(801) Email from (b) (6) (SWRMC) of 151417U AUG 18

(802) Email from (b) (6) (SWRMC) of 241114U JAN 19
(803) 8010 Drills of 1 Jan 10 to 12 Jul 20
(804) SWRMC Evaluation of USS PORTLAND 8010 Drill of 9 May 19
(805) Evaluation USS STOCKDALE CNO Availability Fire Drill (Periodic) of 22 Nov 16
(806) Email from (b) (6) (SWRMC) of 161046U MAR 17
(807) Report on Major Fire Drills Conducted on 24 Feb 16 and 20 Apr 16 at SWRMC of 2 Sep 16
(808) SWRMC Final Report on Major Fire Drill Conducted 31 Oct 18 Onboard USS MAKIN ISLAND Moored at Naval Base San Diego Pier 12 of 13 Dec 18
(809) Report on Major Fire Drill Conducted at SWRMC on 2 Aug 17 of 6 Dec 17
(810) SWRMC 8010 CY18 Major Fire Drill USS MAKIN ISLAND Milestones of 5 Oct 18
(811) Graduated Practice Drill USS MAKIN ISLAND Major Fire Drill Exercise of 9 Oct 18
(812) CNIC Request for Information Ltr 5830 N00/016 of 25 Aug 20
(813) CNRMC Report on Major Fire Drill Conducted at SWRMC Ltr 4790 C200/053 of 27 Feb 19
(814) Report on Major Fire Drill Conducted at SWRMC on 5 Feb 20 of 10 Aug 20
(815) Email from (b) (6) (CNRSW) of 211841U AUG 20
(816) Email from (b) (6) (SWRMC) of 101144U FEB 17
(817) Email from (b) (6) (SWRMC) of 091157U JUL 18
(818) USS HOWARD Damage Control Training Team SWRMC Periodic NTP 8010 Chapter 12 Major Fire Drill Plan of 1 Mar 18
(819) Email from (b) (6) (SWRMC) of 091155U AUG 18
(820) DCTT Event Brief Condition III Flying Squad / Fire & Emergency Services Chapter 12 Fire Drill of Nov 18 to Jan 19
(821) Email from (b) (6) (SWRMC) of 251150U JAN 19
(822) Email from (b) (6) (SWRMC) of 201633U MAR 18
(823) Email from (b) (6) (SWRMC) 211500U MAR 18
(824) Email from (b) (6) (SWRMC) of 101400U MAY 18
(825) USS SAN DIEGO SWRMC Drill Package of 14 Jun 18
(826) Email from (b) (6) (SWRMC) of 021440U JUL 18
(827) USS BUNKER HILL (CG-52) Damage Control Training Team SWRMC Periodic NTP 8010 Chapter 12 Major Fire Drill Plan of 2 Jul 18
(828) Email from (b) (6) (SWRMC) 311300U JUL 18
(829) USS HOWARD SWRMC Periodic Fire Drill Package of 9 Aug 18
(830) Email from (b) (6) (SWRMC) of 231432U OCT 18
(831) Email from (b) (6) (National City) of 081127U AUG 17
(832) Email from (b) (6) (National City) of 111400U SEP 17
(833) Email from (b) (6) (CNRSW) of 181514U OCT 17
(834) Email from (b) (6) (National City) of 011141U MAR 18
(835) Email from (b) (6) (SWRMC) of 050902U SEP 17
(836) Evaluation of USS ZUMWALT PSA/CNO Availability Periodic Fire Drill of 27 Oct 17
(837) Email from (b) (6) (CNRSW) of 061324U MAR 18

(838) Email from (b) (6) (SWRMC) of 191300U APR 18
(839) Email from (b) (6) (SWRMC) of 141400U JUN 18
(840) USS PORTLAND NAVSEA Technical Publication 8010 Chapter 12 Assessment Drill of 28 Nov 18
(841) Email from (b) (6) (SWRMC) of 121346U DEC 18
(842) Summary of Interview of (b) (6) (FEDFIRE)
(843) Email from (b) (6) (SWRMC) of 081400U MAR 18
(844) Email from (b) (6) (CNRSW) of 201025U MAR 18
(845) Email from (b) (6) (SWRMC) of 201506U MAR 18
(846) Email from (b) (6) (CNRSW) of 201146U MAR 18
(847) Email from (b) (6) (SWRMC) of 171321U MAY 18
(848) NAVSEA 8010 Shipboard Availability Fire Prevention and Fire Response of Feb 19
(849) USS PINCKNEY In Hull Central and Off Hull Incident Command Post of 1 Mar 18
(850) SWRMC Notes of USS CHAMPION Drill Observations of 8 Mar 18
(851) Email from (b) (6) (SWRMC) of 241425U APR 18
(852) Email from (b) (6) (SWRMC) of 121300U SEP 18
(853) USS MAKIN ISLAND CH 13 Observation Training Day of 15 Oct 18
(854) Email from (b) (6) (SWRMC) of 071105U FEB 19
(855) Email from (b) (6) (SWRMC) of 271330U OCT 17
(856) Evaluation of USS RUSSELL CNO Avail Periodic Fire Drill of 20 Sep 17
(857) Evaluation of USS PAUL HAMILTON CNO Avail Periodic Fire Drill of 23 Aug 17
(858) SWRMC 8010 Chapter 12 Drill +180 Evaluation of USS BOXER of 29 Jun 17
(859) Email from (b) (6) (CNSP) of 281529U FEB 20
(860) USS AMERICA SWRMC 8010 MFD Chapter 12-13 Drill Evaluation of 18 Apr 18
(861) USS PEARL HARBOR SWRMC 8010 Major Fire Drill Evaluation of 6 Nov 18
(862) Email from (b) (6) (SWRMC) of 131149U NOV 18
(863) USS PORTLAND SWRMC 8010 MFD Chapter 12 Drill Evaluation of 4 Dec 18
(864) Email from (b) (6) (SWRMC) of 091427U MAY 17
(865) SWRMC 8010 Chapter 12 Drill Evaluation of USS NEW ORLEANS of 29 Aug 17
(866) Evaluation of USS FORTWORTH CNO Availability Periodic Fire Drill of 23 Oct 17
(867) Email from (b) (6) (SWRMC) of 131501U APR 18
(868) Email from (b) (6) (SWRMC) of 141517U MAY 18
(869) Email from (b) (6) (SWRMC) of 101254U DEC 18
(870) Email from (b) (6) (SWRMC) of 271357U SEP 18
(871) Evaluation of USS HIGGINS CNO Availability 8010 +180 Periodic Fire Drill of 5 Mar 19
(872) Email from (b) (6) (CNSP) of 311559U OCT 17
(873) Email from (b) (6) (SWRMC) of 121545U JAN 18
(874) Email from (b) (6) (SWRMC) of 271021U DEC 18
(875) SWRMC 8010 Fire Drill Lessons Learned of 20 Sep 18
(876) USS BONHOMME RICHARD Repair Party Manual of 9 Aug 15
(877) CNSP/CNSL CNO Availability Best Practices of 30 Dec 19

(878) Summary of Interview of (b) (6) (NAVSEA)
(879) Summary of Interview of (b) (6) (CNRMC)
(880) Summary of Interview of (b) (6) (CNRMC)
(881) Summary of Interview of (b) (6) (CNRMC)
(882) CNRMC Approved Org Chart of 27 Feb 20
(883) Summary of Interview of (b) (6) (NAVSEA)
(884) Email from (b) (6) of 071238U APR 16
(885) Email from (b) (6) (NAVSEA) of 071126U APR 16
(886) Email from (b) (6) of 080513U APR 16
(887) Email from (b) (6) of 110839U APR 16
(888) Email from (b) (6) (NAVSEA) of 250546U MAY 16
(889) Email from (b) (6) of 131038U JUN 16
(890) Email from (b) (6) (NAVSEA) of 240848U JUN 16
(891) Email from (b) (6) (CNRMC) of 131649U Apr 16
(892) Email from (b) (6) (NAVSEA) of 131046U JUN 16
(893) Summary of Interview of (b) (6) (NAVSEA)
(894) Email from (b) (6) (CNRMC) of 241220U MAY 16
(895) Email from (b) (6) (CNRMC) of 241156U MAY 16
(896) Email from (b) (6) (CNRMC) of 130455U APR 16
(897) Email from (b) (6) of 131008U JUN 16
(898) CNRMCINST 5450.1 NRMO Working Relationships of 23 May 13
(899) Summary of Interview of (b) (6) (NAVSEA)
(900) NRMO San Diego 31 July 2015 SWRMC and NASSCO-SD Struggle to Meet Fire Safety Requirements Summary
(901) Temporary Fire Protection Improvements Needed of 20 Jun 16
(902) Email from (b) (6) (CNRMC) of 201530 Z JUN 20
(903) Email from (b) (6) (CNRMC) of 071236U JUN 17
(904) NRMO San Diego Notice Slide of 5 Sep 13
(905) USS CHANCELLORSVILLE Firewatch Discrepancies of 3 Aug 12
(906) Firezone Boundary and Fire Safety Violations of 31 Aug 12
(907) Fire Safety and Facility Inspection at BAE Shipyard of 21 Sep 12
(908) Fire and Electrical Safety at CMSD of 2 Nov 12
(909) Unsafe Hot Work in Graving Dock at Naval Base San Diego of 25 Jan 13
(910) Fire Safety in BAE's Dry Dock of 31 May 13
(911) Ongoing Dry Dock Fire Safety Oversight of 9 Aug 13
(912) USS ESSEX Fire and Corrective Actions Taken of 6 Sep 13
(913) NAVSEA USS ESSEX Fire and Corrective Actions Taken of 6 Sep 13
(914) NRMO San Diego USS ESSEX Fire and Corrective Actions Taken (Encl. 3) of 6 Sep 13
(915) Hot Work Control Deficiencies Resulting in Multiple Fires of 20 Dec 13
(916) BAE Fire Prevention and Safety of 21 Feb 14

(917) Fire Protection for USS ARDENT in NBSD Graving Dock Requires Improvement of 21 Jan 16
(918) SW18 FMAA Results - Diagram of Temporary De-watering Systems of 29 Jan 18
(919) Email from (b) (6) (NASSCO) of 051128U MAR 20
(920) Quick Deficiency Resolution Enables Sufficient Fire Response of 30 Jan 15
(921) Email from (b) (6) (NAVSEA) of 131141U SEP 16
(922) NAVSEA Note 5215 Cancellation of NAVSEA Instructions of 17 Oct 18
(923) Summary of Interview of RADM Downey, James (CNRMC)
(924) Summary of Interview of (b) (6) (NRMO)
(925) Summary of Interview of (b) (6) (NAVSEA)
(926) Summary of Interview of (b) (6) (NAVSEA)
(927) Summary of Interview of RDML Lloyd, Jason (NAVSEA)
(928) Summary of Interview of (b) (6) (SWRMC)
(929) Summary of Interview of (b) (6) (SWRMC)
(930) Summary of Interview of (b) (6) (SWRMC)
(931) Summary of Interview of (b) (6) (NAVSEA)
(932) NAVSEA Technical Authorities of 5 Oct 20
(933) NAVSEA Engineering and Technical Authority Manual of 6 Jun 11
(934) Summary of Interview of (b) (6) (NAVSEA)
(935) Summary of Interview of (b) (6) (NAVSEA)
(936) NAVBASESANDIEGOINST 5450.8T NBSD Information Handbook of 14 Jun 19
(937) Firefighting Department San Diego Community Risk Assessment - Standards of Cover of 1 Dec 19
(938) Summary of Interview of (b) (6) (NBSD)
(939) CNIC F&ES Staffing and Response Time Objectives for Shipboard Fire Suppression Advisory of 12 May 15
(940) Navy Fire & Emergency Services SD Metro Standard Operating Guideline - Shipboard Firefighting of 10 Oct 12
(941) Summary of Interview of (b) (6) of 20 Oct 20
(942) Summary of Interview of (b) (6) (SDFD)
(943) 2020 Master Annual Training Plan for FEDFIRE San Diego Personnel of 29 Oct 19
(944) 2020 Metro Annual Training Plan
(945) CNIC Shipyard Fire & Emergency Services Proficiency Training Requirements for Shipboard Emergency Response of 19 Mar 14
(946) CNRSW Response Memo to Request for Information Ltr 5830 N00/139 of 10 Dec 20
(947) CNRSW Index Responses to Request for Information Ltr 5830 N00/139 of 10 Dec 20
(948) Fire Chief Duty Tasks List of 9 Sep 20
(949) Fire Chief Training Information 2020
(950) FEDFIRE Shipboard Fire Tactics and Strategies Training Presentation
(951) Interview Review of (b) (6) (FEDFIRE)
(952) Summary of Interview of (b) (6) (FEDFIRE)
(953) Email from (b) (6) (SWRMC) 191151U MAR 20

(954) CNRSW and City of Coronado Mutual Aid Agreement of 20 Apr 18
(955) San Diego County Fire Mutual Aid Agreement of 2 Nov 92
(956) City of San Diego and Commander, NBSD Mutual Aid Agreement of 21 Mar 91
(957) Summary of Interview of (b) (6) (CNRSW)
(958) Memorandum for the Record 5830 N00/158 of 4 Feb 21
(959) Summary of Interview of (b) (6) (CNRSW)
(960) Approved Naval Base San Diego Emergency Maintenance Plan of 11 Oct 17
(961) USS BHR CDO, BOC and IMT Watchstanders 12 Jul 20 to 16 Jul 20
(962) Summary of Interview of (b) (6) (NBSD)
(963) Summary of Interview of (b) (6) (NBSD)
(964) Naval Base San Diego Hazard Specific Annex 3 Fire Hazards
(965) Naval Base San Diego Hazard Specific Appendix Checklist
(966) Email from (b) (6) (NBSD) of 300844U OCT 18
(967) Email from (b) (6) (NBSD) of 091033U OCT 18
(968) Summary of Interview of (b) (6) (NBSD)
(969) Email from (b) (6) (NBSD) of 240923U AUG 20
(970) Email from (b) (6) (NBSD) of 010949U APR 20
(971) Email from (b) (6) (NBSD) of 240827U AUG 20
(972) Email from (b) (6) (NBSD) of 240917U AUG 20
(973) Report of Common Discrepancies throughout Piers 1-7 of 25 Apr 20
(974) Email from (b) (6) (NBSD) of 131155U APR 20
(975) Photo Depiction of USS BONHOMME RICHARD Alongside Pier [IMG 952994]
(976) Email from (b) (6) (BHR) of 051542U SEP 18
(977) Email from (b) (6) (NBSD) of 131111U SEP 18
(978) Email from (b) (6) (NBSD) of 130721U SEP 18
(979) Unified Facilities Criteria Dockside Utilities for Ship Service of 1 Sep 12
(980) Email from (CNRSW) of 241652U AUG 20
(981) Email from (b) (6) (NBSD) 231645U JUL 20
(982) NAVFAC Pier 2 Inspection Report of 11 Jul 18
(983) Email from (b) (6) (NBSD) of 231636U JUL 20
(984) Unified Facilities Criteria Design Piers and Wharves of 24 Jan 17
(985) Email from (b) (6) (NAVFAC) of 201233U JUL 20
(986) Summary of Interview of (b) (6) (CNRSW)
(987) Summary of Interview of (b) (6) (CNRSW)
(988) Summary of Interview of (b) (6) (CNRSW)
(989) Summary of Interview of (b) (6) (CNRSW)
(990) Summary of Interview of (b) (6) (CNRSW)
(991) CNIC Fire & Emergency Services Program Compliance Assessment for CNRSW San Diego Metro Fire District of 24 Feb 14
(992) Summary of Interview of (b) (6) (CNIC)
(993) Summary of Interview of (b) (6) (CNIC)
(994) NSIRC Presentation of BHR Fire of 15 Jul 20

(995) Photo Depiction of BHR Forward Stack [IMG 7584]
(996) Photo Depiction of Inside BHR Superstructure [PNG 288]
(997) Photo Depiction of Inside BHR Superstructure [PNG 291]
(998) Photo Depiction of Inside BHR Superstructure [PNG 290]
(999) Photo Depiction of BHR Superstructure [ASI 1510]
(1000) Photo Depiction of BHR Superstructure [ASI 1512]
(1001) Photo Depiction of BHR Flight Deck [ASI 1471]
(1002) Photo Depiction of USS BONHOMME RICHARD Quick Acting Water Tight Door on 8 Oct 20 [IMG 1061]
(1003) SECNAV Press Release Decommission USS BONHOMME RICHARD of 30 Nov 20
(1004) Decommission for USS BONHOMME RICHARD CNO Message of 261923Z JAN 21
(1005) Email from (b) (6) (CNSP) of 21721U OCT 20
(1006) USS FITZGERALD Response to Request for Information Ltr 5830 N00/033 of 1 Sep 20
(1007) Email from (b) (6) (NAVFAC) of 011246U DEC 20
(1008) Final Hose Justification of 8 Aug 20
(1009) CNRSW GPC Purchase Request Form of 9 Sep 20
(1010) (b) (6) Purchase Card Request of 6 Aug 20
(1011) Email from (b) (6) (Code 15) of 011420U DEC 20
(1012) NBSD Navy Blue Message of Z 122233Z JUL 20
(1013) Summary of Interview of (b) (6) (CNSP)
(1014) USS BONHOMME RICHARD Fire Patient Tracking of 12 Jul 20
(1015) Request for Information Related to USS BONHOMME RICHARD (LHD 6) Fire
(1016) Email Correspondence from (b) (6) (BHR) of 100854U DEC 20
(1017) Email from (b) (6) (SDFD) of 301113U Nov 20
(1018) Email from (b) (6) (CFD) of 271658U NOV 20
(1019) Command Investigation into Fire Onboard USS MIAMI of 19 Jun 14
(1020) USS MIAMI Fire Panel Recommendations (Redacted) of 16 Nov 12
(1021) USS MIAMI Fire Panel Priority Recommendations Status Spreadsheet of 3 Sep 20
(1022) USS MIAMI Fire Panel Recommendation Closure Status (Score Card) of 3 Sep 20
(1023) Types of Reportable Fires Web Enabled Safety System of 26 Aug 20
(1024) Consolidated COMNAVSAFECEN Afloat Safety Advisory Message 1-20 of R 201549Z FEB 20
(1025) NFIRS NAVSEA PFOR Web Enabled Safety System Comparison
(1026) Web Enabled Safety System (WESS) Fire Under Reporting of 26 Aug 20
(1027) Email from (b) (6) (NAVSEA) of 110537U Jan 21
(1028) Email from (b) (6) (NAVSEA) of 050945U Jan 21
(1029) Command Investigation into Fire onboard USS GUNSTON HALL of 3 Apr 15
(1030) Command Investigation into Fire onboard USS IWO JIMA of 6 May 20
(1031) Command Investigation of Class A Fire onboard USS DEVASTATOR of 3 Apr 19
(1032) Command Investigation into Class C Fire onboard USS CHAMPION of 11 Feb 20
(1033) Command Investigation of Fire onboard USS HUE CITY of 14 Apr 14
(1034) Command Investigation into Fire onboard USS BOXER of 2 Mar 18

(1035) Command Investigation into Class A Fire onboard USS DEVASTATOR of 3 Apr 19
(1036) Email from (b) (6) (SWRMC) of 292054U NOV 19
(1037) FEDFIRE USS CHAMPION After Action Report of 5 Dec 19
(1038) Fire & Emergency Services Fire Prevention Investigation Report of 28 Mar 20
(1039) Command Investigation into Class A Fire onboard USS HARPERS FERRY of 3 Sep 20
(1040) Email from (b) (6) (CNSP) of 300409U MAR 20
(1041) Email from (b) (6) (SWRMC) of 030820U SEP 20
(1042) Email from (b) (6) (SWRMC) of 030807U SEP 20
(1043) Email from (b) (6) (SWRMC) of 291318U MAR 20
(1044) NAVSEA USS HARPERS FERRY Safety Fact Sheet
(1045) Email from (b) (6) (CNSP) of 061502U MAY 20
(1046) "Russia's Only Aircraft Carrier Burning After Welding Mishap, At Least 1 Dead," USNI News, 12 Dec 19 [Media]
(1047) "New Chinese Assault Carrier Catches Fire," Forbes, 11 Apr 20 [Media]
(1048) "French Submarine Burns in Unbelievably Fierce Fire for 14 Hours," Defense News, 16 Jun 20 [Media]
(1049) Closure of USS MIAMI Fire Panel Recommendations of 24 Feb 14
(1050) Summary of Interview of (b) (6) (USFFC)
(1051) Second Endorsement on USS CHAMPION Fire of 1 May 20
(1052) Final Endorsement on USS OSCAR AUSTIN Fire of 9 May 19
(1053) Damage Control Board of Directors Presentation of 1 Jul 19
(1054) Damage Control Board of Directors Minutes of 1 Jul 19
(1055) Damage Control Board of Directors Memorandum of 25 Sep 19
(1056) Damage Control Board of Directors Memorandum of 18 Nov 19
(1057) COMNAVSURFPAC/COMNAVSURFLANTINST 3541.1A Standard Repair Party Manual for Naval Surface Forces of 11 Mar 15
(1058) Damage Control Board of Directors Power Point of 4 Dec 19
(1059) Damage Control Board of Directors Minutes of 4 Dec 19
(1060) Email from RDML William Greene (USFF) of 290646U FEB 20
(1061) Damage Control Board of Directors Minutes of 21 Sep 20
(1062) Damage Control Board of Directors Presentation of 21 Sep 20
(1063) Email from (b) (6) (CNAP) of 260624U JUN 12
(1064) Email from (b) (6) (CNAP) of 270648U AUG 12
(1065) Email from (b) (6) (CNAP) of 240919U OCT 12
(1066) Email from (b) (6) (CNAP) of 020638U OCT 12
(1067) USS MIAMI Fire Lessons Learned Flag/SES Integration Group Update of 4 Mar 13
(1068) Email from (b) (6) (CNAP) of 010649U MAY 13
(1069) Email from (b) (6) (CNAP) of 220656U MAY 13
(1070) Improving Shipyard Fire Prevention and Response Message of R 261400Z JUL 12
(1071) USS MIAMI Fire Panel Recommendation Discussion Paper of 31 Mar 14
(1072) Summary of Interview of (b) (6) (NAVSEA)
(1073) Promulgation of Ship Safety Manual for Fire Prevention and Response of 6 Feb 14

(1074) 8010 Industrial Ship Safety Manual for Fire Prevention and Response of 17 Jul 18
(1075) USS MIAMI Fire Panel Priority Recommendations and Objective Quality Evidence of 10 Mar 14
(1076) Executive Agent for Damage Control Update of 14 Apr 14
(1077) Email from (b) (6) (CNRMC) of 120904U DEC 16
(1078) FY-15 NAVSEA Standard Items Change One of 16 Jun 14
(1079) Email from (b) (6) (COMPACFLT) of 061247Z OCT 20
(1080) Closure of USS MIAMI Fire Panel Recommendations of 7 Apr 14
(1081) SWRMC Fleet Maintenance Activity Assessment Results of 27 Feb 20
(1082) SWRMC Fleet Maintenance Activity Assessment Results of 27 Jan 20
(1083) Summary of Interview of (b) (6) (NAVSEA)
(1084) Summary of Interview of (b) (6) (NAVSEA)
(1085) Summary of Interview of (b) (6) (NAVSEA)
(1086) 8010 Requirements Invoked in Repair Contracts Email of 31 Jul 19
(1087) 8010 vs Contract Invoked Requirements for 26 Items in Gap Analysis Report of 29 Jul 19
(1088) 8010 vs Contract Invoked Requirements for 26 Items in Gap Analysis Spreadsheet of 31 Jul 19
(1089) Assessment of Fire Safety Programs with Focus on Fire Protection and Prevention Report of 21 Feb 20
(1090) NAVSEA Presentation on Industrial Fire Safety, Fire Prevention and Control
(1091) Email from (b) (6) (COMPACFLT) of 271235U FEB 20
(1092) Email from RDML William Greene (USFF) of 280621U FEB 20
(1093) Closure of USS MIAMI Fire Panel Recommendations of 21 Dec 15
(1094) Email from (b) (6) (SWRMC) of 061551U OCT 16
(1095) OPNAVINST 3541.1G Surface Ship and Submarine Survivability Training Requirements of 7 Mar 16
(1096) Damage Control Assistant & Senior Enlisted Training Course Control of Oct 19
(1097) Damage Control Repair Party Leader Training Course Control Document of Feb 20
(1098) Advanced Shipboard Fire Fighting Training Course Control Document of Apr 15
(1099) General Shipboard Firefighting (Great Lakes) Training Course Control Document of Sep 17
(1100) General Shipboard Fire Fighting SCBA Training Course Control Document of Oct 16
(1101) Shipboard Fire Fighting Integrated Team Trainer Training Course Control Document of Nov 16
(1102) Shipboard Firefighting & Damage Control Emergency Team Trainer Training Course Control Document of Dec 19
(1103) Summary of Interview of (b) (6) (SWOS)
(1104) Commander, Naval Sea Systems Command Firefighting Training Observations of 9 Jun 16
(1105) Summary of Interview of (b) (6) (SWOS)
(1106) CNIC Shipyard Fire & Emergency Services Requirement of 24 Jul 12

(1107) Email from [redacted] (FEDFIRE) of 130848U NOV 20
(1108) OPNAVINST 3440.18 Procedures and Reporting Requirements for Major Shipboard Non-Nuclear Casualties While In Port at U.S. Naval Installation or a U.S. Ship Repair or Construction Activity of 13 Nov 18
(1109) Email from [redacted] (USFF) of 290928U NOV 16
(1110) Command Tasker System Report on Development of OPNAVINST 3440.18 - Tasker #0453-15 (2015 Tasker)
(1111) OPNAV N4 Information Brief - Major Shipboard Non-Nuclear Casualty Instruction of 11 Jun 18
(1112) Email from [redacted] (USFF) of 041232U FEB 15
(1113) Command Tasker System Report on Development of OPNAVINST 3440.18 - Tasker #1345-17 (2017 Tasker)
(1114) Command Tasker System Report on Development of OPNAVINST 3440.18 - Tasker #1166-18 (2018 Tasker)
(1115) OPNAVINST 34XX.XX Procedures and Reporting Requirements Flag/SES Coordination Page of Jul 18
(1116) Email from [redacted] (OPNAV) of 311302U AUG 18
(1117) Coordination Comments and Input on Development of OPNAVINST 3440.18 (GOFO/SES Review)
(1118) Email from [redacted] (NAVSEA) of 041207U JUL 18
(1119) Email from [redacted] (NAVSEA) of 241027U JUL 18
(1120) Maritime Operations Center Standing Order Number 326 of 14 Feb 18
(1121) COMUSFLTFORCOM Norfolk, VA Designation of Area Commands for Major Shipboard Non-Nuclear of R 192325Z DEC 20
(1122) SWRMC Fire Response Plan of 31 Jan 20
(1123) MARMCINST 11320.1D - Fire Response Plan of 22 Jul 20
(1124) Formal Review and Assessment of USS MIAMI Fire Corrective Action Effectiveness of 16 Jul 20
(1125) Formal Review and Assessment of USS MIAMI Fire Corrective Action Effectiveness Recommendations of 12 Aug 20
(1126) Commander, Naval Air Forces Advance Change Notice One for Standard Repair Party Manual of 26 Aug 20
(1127) CNSF Post-BHR OPT Actions Memo
(1128) Commander, Naval Surface Forces Aviation Type Commander Fire Safety Assessment Program of 18 Sep 20
(1129) Fire Marshal 8010 Evaluation Sheet Template
(1130) Commander, Naval Surface Forces Redline Instruction 3504.1E of 23 Sep 20
(1131) Commander, Naval Surface Forces 8010 Compliance and Reporting Guidance of 2 Oct 20
(1132) Commander, Pacific Fleet Assignment of Responsibility for USS BONHOMME RICHARD Fire of 22 Oct 20
(1133) NAVSEA Directed Fire Prevention Requirements of 231419Z Oct 20

(1134) Commander, Naval Surface Forces USS BONHOMME RICHARD Fire Follow up Actions Tracking of 3 Nov 20

(1135) Commander, Naval Surface Forces Advance Change Notice for Redline Instruction of 6 Nov 20

Appendix B: References

(a) JAGINST 5800.7G (JAGMAN), Chapter II
(b) 31 U.S.C. §3721, Military Personnel and Civilian Employees' Claims Act
(c) National Incident Management System (NIMS), 3d Ed.
(d) NTTP 3-20.31, Surface Ship Survivability
(e) DoDI 6055.17, DoD Emergency Management (EM) Program
(f) UFC 4-150-02, Dockside Utilities for Ship Service, With Change 5
(g) UFC 4-152-01, Design: Piers and Wharves
(h) U.S. Navy Regulations
(i) OPNAVINST 11320.23G, Navy Fire and Emergency Services Program
(j) OPNAVINST 3040.5E, Procedures and Reporting Requirements for Nuclear Reactor and Radiological Accidents
(k) OPNAVINST 3120.32 (series), Standard Organization and Regulations of the U.S. Navy (SORM)
(l) OPNAVINST 3440.17A, Navy Installation Emergency Management Program
(m) OPNAVINST 3440.18, Procedures and Reporting Requirements for Major Shipboard Non-Nuclear Casualties While In Port at a U.S. Naval Installation or a U.S. Ship Repair or Construction Activity
(n) OPNAVINST 3541.1 (series), Surface Ship and Submarine Survivability Training Requirements
(o) OPNAVINST 5100.23H, Safety and Occupational Health Program
(p) OPNAVINST 5400.45, Standard Navy Distribution List, Administrative Organization of the Operating Forces of the U.S. Navy (SNDL)
(q) OPNAVINST 5450.339, Mission, Functions, and Tasks of Commander, Navy Installations Command
(r) NAVSEAINST 5400.95G, Waterfront Engineering and Technical Authority Policy
(s) NAVSEAINST 5400.97C, Virtual SYSCOM Engineering and Technical Authority Policy
(t) NAVSEA Technical Publication, Industrial Ship Safety Manual for Submarines, S9002-AK-CCM-010/6010
(u) NAVSEA Technical Publication, Industrial Ship Safety Manual for Fire Prevention and Response, S0570-AC-CCM-010/8010
(v) NAVSEA Ships' Technical Manual (NSTM) Chp 074 Vol 3, Rev 7, Gas Free Engineering
(w) NAVSEA Ships' Technical Manual (NSTM) Chp 077, Rev 8, Personnel Protection Equipment
(x) NAVSEA Ships' Technical Manual (NSTM) Chp 079 Vol 1, Rev 2, Damage Control, Stability and Buoyancy
(y) NAVSEA Ships' Technical Manual (NSTM) Chp 555 Vol I, Rev 15, Surface Ship Firefighting

(z) NAVSEA USS BONHOMME RICHARD (LHD-6) Fire Failure Review Board (NAVSEA FRB)
(aa) CNICINST 3440.17, Navy Installation Emergency Management (EM) Program
(ab) CNICINST 5450.6, Mission Functions and Tasks of Commander, Navy Region Southwest
(ac) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual (JFMM)
(ad) COMNAVSURFORINST 3120.1, Zone Inspections
(ae) COMNAVSURFPACINST/COMNAVSURFLANTIST 3502.7A, Surface Force Training and Readiness Manual (SFTRM)
(af) COMNAVSURFPACINST/COMNAVSURFLANTINST 3504.1 (Series), MOB-D Mission Area Standards Operating Procedures (Red Lines)
(ag) COMNAVSURFPACINST/COMNAVSURFLANTLINST 3541.1A, Standard Repair Party Manual for Naval Surface Force
(ah) NFPA 1405, Guide for Land-Based Fire Department that Respond to Marine Vessel Fires

Appendix C: Command Investigation Report Figures

Appendix D: BONHOMME RICHARD Fire Timeline

Below is a timeline of the first several hours of the response effort to the fire aboard USS BONHOMME RICHARD (LHD-6). In general, this timeline aligns with the sequence of events developed by the Naval Sea Systems Command (NAVSEA) Failure Review Board (FRB), with several minor variations. The greater length and scope of this investigation permitted detailed interviews with hundreds of witnesses and allowed this investigation to corroborate their recollection of key events with time-stamped audio and visual evidence.

Major Events from 0745 – 1100 on 12 July 2020			
	BONHOMME RICHARD	**FEDFIRE**	**Municipal Agencies**
745	Duty Section Turnover		
746			
747			
748			
749			
750			
751			
752			
753			
754			
755			
756			
757			
758			
759			
800			
801			
802	(b) (6) observes		
803	Lower V looks "foggy"		
804			
805			
806			
807			
808			
809			
810	(b) (6) observes		
811	smoke, runs to report to		
812	OOD		
813			

814	calls DC Central, (b) (6) [redacted] dispatched as investigator	
815		
816	(b) (6) [redacted] descends Lower V ramp, runs to DCRS 5M, yells for OOD to "call it away"	
817		
818		
819		
820	OOD calls DC Central -- after hearing no 1MC announcement, OOD calls casualty from Quarterdeck	
821		
822		
823	(APPROXIMATE) Unsuccessful attempts to access Lower V by (b) (6), (b) (6) [redacted] (b) (6) [redacted]	
824		
825		
826		FEDFIRE dispatched
827		
828		
829		FEDFIRE units arrive at Pier 2, BHR directs FEDFIRE to port ACE
830	0829: EDO logs "5M manned and ready"	
831		
832		
833	(APPROXIMATE) (b) (6) [redacted] and (b) (6) [redacted] out as investigators	
834		
835		
836		
837		
838	(APPROXIMATE) Team led by (b) (6) [redacted] descends to Upper V and returns	
839		
840		Deck Log: "Naval Base San Diego Fire Department On-Scene"
841		
842		
843		
844		
845		
846		
847		FEDFIRE Engine 16, assisted by (b) (6) [redacted], lays hose from potable riser, up port ACE, down to Lower V
848	(APPROXIMATE) Team led by (b) (6) [redacted] descends to Upper V, unsuccessfully attempts to	
849		
850		
851		
852		Despite laying hose down to

853	locate hose at port/starboard sideport door fire stations	Lower V, FEDFIRE Engine 16 withdraws without turning on water due to SCBA low air alarm	
854			
855			
856			
857			
858			
859			
900			Initial SDFD units arrive on Pier 2
901			
902			
903			
904	EDO notes six-man team on air (no witness corroboration)		
905		FEDFIRE Truck 17 relieves Engine 16, descends to Lower V, employs water for cooling/heat detection, withdraws to Hangar Truck 17 is accompanied by (b) (6)	
906			Additional municipal units arrive on Pier 2
907			
908			
909			
910	(APPROXIMATE) CO arrives at ICP		
911			
912			
913			
914			
915	CDO (with CO concurrence) orders non-SCBA wearing personnel to evacuate		
916			
917			
918		FEDFIRE Engine 12, accompanied by (b) (6), relieves Truck 17 on Upper V ramp -- (b) (6) leaves Engine 12 and withdraws with Truck 17 to the Hangar FEDFIRE Engine 12 team member receives SCBA low air alarm, causing Engine 12 to back-out before reaching Lower V	
919			
920			
921			
922			
923			
924			
925			SDFD (b) (6) enters sideport door alone to investigate source of fire
926			
927			
928			
929			
930	Engineering Log: "NBSD FIRE DEPT. ASSUMED CONTROL OF ALL FIREFIGHTING EFFORTS"		
931			SDFD directed to depart Hangar by FEDFIRE
932			

933		FEDFIRE Engine 19 relieves Engine 12 near Upper V ramp Upon reaching Upper V, Engine 19 encounters SDFD teams entering via the sideport door -- Engine 19 exits via the sideport door without reaching Lower V	SDFD (b) (6) radios that he has found the fire (in Upper V)
934			
935			
936			SDFD (b) (6) 's team enters Upper V to investigate
937			
938			
939			
940	EDO logs: "Ordered IET to abandon ship"		SDFD (b) (6) 's team departs, discusses fire location with (b) (6) on pier
941			
942			
943			
944	Aft shore power secured		SDFD (b) (6) 's team reenters BHR, descends to Lower V (app. 5 – 10 feet past the ramp), withdraws due to unfamiliarity with the compartment
945			
946			
947			
948			
949			
950			
951			Additional SDFD teams enter and begin combatting the fire in Upper V (FIRST AGENT ON FIRE)
952			
953			
954		FEDFIRE terminates attack on port ACE and stages outside of sideport door	SDFD conducts continuous firefighting effort in Upper V. Multiple teams enter and rotate through firefighting. One team focuses on fighting radiant fires in Upper V, the second sprays water down the Lower V ramp
955			
956			
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1000			
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1003			
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1007			
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1009			
1010			
1011			
1012			

1013			
1014			
1015	BHR DC Sailors develop plan to enter ship and align AFFF sprinkling, approved by CO		
1016			
1017			
1018			
1019			
1020			
1021			
1022			
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1024			
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1026			
1027			
1028			
1029			
1030	By the time BHR Sailors attempt to execute, civilian firefighters are withdrawing		
1031			
1032			
1033			
1034			
1035			SDFD (b) (6) says "this space [Upper V] is about to blast"
1036			
1037		ICP directs evacuation of BHR	ICP directs evacuation of BHR
1038			
1039			
1040			
1041			
1042			
1043			SDFD pulls hoses and equipment out of BHR
1044			
1045			
1046			
1047			
1048			
1049			
1050	Massive Explosion		
1051	Pier Evacuated. All units conduct an accountability check. ICP moved to base of pier, then again to SAR Swimming Pool parking lot.		
1052			

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1059	
1100	

Appendix E: BONHOMME RICHARD FSC Minutes

The information contained in this table was included verbatim from Fire Safety Council (FSC) meeting minutes. Any inconsistencies in naming conventions or typos are original.

Meeting Date	Attendees	Topics Discussed
29 OCT 2018	(b) (6)	Fire Prevention - Firefighting - FZB – FM - Safety Walkthroughs - Hotwork - Installed FM Systems - Fire Drills - F&ES - Shipyard Evolutions - Lessons Learned - Unplanned Events
08 NOV 18	(b) (6)	CH12 Fire Drill Waiver
08 NOV 18	(b) (6)	DCRS Lay-up
08 NOV 18	(b) (6)	Portable Extinguisher Removal
27 NOV 2018	(b) (6)	Defueling
14DEC2018	(b) (6)	8010 CH12 Fire Drill Schedule and Expectations

18JAN2019	(b) (6) [redacted]	1MC Outage
23JAN2019	(b) (6) [redacted]	Emergency Brow Access
25JAN2019	(b) (6) [redacted]	Lube Oil Transfer
29JAN2019	(b) (6) [redacted]	NBSD Federal Fire Dept. TTX
31JAN2019	(b) (6) [redacted]	1MC Temporary Outage
31JAN2019	(b) (6) [redacted]	Portable Fire Extinguisher Displacement
06FEB2019	(b) (6) [redacted]	Fire Zone Boundary Mitigations for CHT Hydroblasting
12FEB2019	(b) (6) [redacted]	Temporary Firemain Inspection, Operation, Care, and Testing
22FEB2019	(b) (6) [redacted]	AUX 6-73-0-E Fire Protection

01MAR2019	(b) (6) [redacted]	Temp FM Hose Reroute
13MAR2019	(b) (6) [redacted]	Temp FT #13 Valve Replacement
14MAR2019	(b) (6) [redacted]	Fire Zone Boundary FR 81 Access Cut
14MAR2019	(b) (6) [redacted]	Temporary Firemain Hose Protection
29MAR2019	(b) (6) [redacted]	Quarterdeck Move
29MAR2019	(b) (6) [redacted]	Fuel Piping Drain MMR #2
29APR2019	(b) (6) [redacted]	Ballasting Plan using Temp Firemain -
03MAY2019	(b) (6) [redacted]	CH12 +180 Drill Waiver
05JUN2019	(b) (6) [redacted]	Fixed Extinguished System Hazards

	(b) (6)	
12JUN2019	(b) (6)	Brow Conditions
12JUN2019	(b) (6)	Temporary Firemain Conditions in Dry Dock
02JUL2019	(b) (6)	8010 CH12 Drill Evaluation Criteria
16JUL2016	(b) (6)	Temp FM Hose Repositioning
24JUL2019	(b) (6)	8010 CH 12 +180 Fire Drill Outbrief
30JUL2019	(b) (6)	Temporary Firemain Piping Repair
08AUG2019	(b) (6)	Fire Detection System(s)

08AUG2019	(b) (6) [redacted]	Rescue & Assistance Between BONHOMME RICHARD and HIGGINS
23AUG2019	(b) (6) [redacted]	Temporary FM Configuration
23AUG2019	(b) (6) [redacted]	Fire Zone Boundary Door 02-65-4
04SEP2019	(b) (6) [redacted]	Fire Zone Boundary Taken Out of Service 01-33-3; 1-33-2; 01-47-7
110SEP2019	(b) (6) [redacted]	Primary Brow
08 OCT 19	(b) (6) [redacted]	Ammo Movements to Support Weaponing Quals
24 OCT 19	(b) (6) [redacted]	Fire Zone Boundary 1-33-2 and 1-32-4 Doors Removed for Preservation
13 NOV 19	(b) (6) [redacted]	CHP 12 Drill Date and Time
19 NOV 19	(b) (6) [redacted]	Fire Zone Boundary 02-65-5 Door Removal
17 DEC 19	(b) (6) [redacted]	Temp Firemain Concerns for Undocking and return to NBSD

	(b) (6) [redacted]	
18 DEC19	(b) (6) [redacted]	Going to Single Brow for Undocking
1/6/20	(b) (6) [redacted]	Fire Main and Hot Work Restoration
15JAN20	(b) (6) [redacted]	Emergency Brow Shift
15JAN20	(b) (6) [redacted]	Ammo Movement
29JAN2020	(b) (6) [redacted]	NTP 8010 Brow Requirement Deviation
18FEB2020	(b) (6) [redacted]	Lube Oil Onload
20 FEB 2020	(b) (6) [redacted]	Movement of CH 12 +360 Drill Date

21FEB2020	(b) (6) [redacted]	Ammo Movement
06MAR2020	(b) (6) [redacted]	F2B Door Removal
20MAR2020	(b) (6) [redacted]	Temporary Quarterdeck Shift
02APR2020	(b) (6) [redacted]	Fire Zone Boundary 02-33-8 Door Removal
07APR2020	(b) (6) [redacted]	Fuel Onload
08APR2020	(b) (6) [redacted]	1MC Outage
29APR2020	(b) (6) [redacted]	1MC Outage
23APR2020	(b) (6) [redacted]	Movement of 2M and 2F DCRS
30APR2020	(b) (6) [redacted]	Lube Oil transfer

28MAY2020	(b) (6) [redacted]	Temporary Quarterdeck Shift
08JUL2020	(b) (6) [redacted]	Egress Brow and Quarterdeck Movement
08JUL2020	(b) (6) [redacted]	Ammo Movement

Appendix F: SWRMC 8010 Manual Drills 17 July 2018 to 12 July 2020

Below is a table of SWRMC 8010 Manual drill requirements from 17 July 2018 to 12 July 2020. Gray boxes indicate no drill was required within this time period. Green boxes indicate the drill was completed on time. Orange boxes indicate the drill was completed, but outside of the 8010 Manual time requirement. Red boxes indicate no drill was completed, meaning the 8010 Manual requirement was not met. This table was developed from numerous pieces of evidence, including [26400, 4894, 5447, 5324, 2659, 5784, 5350, 5712, 5736, 6975, 5293].

Appendix D
8010 Manual Drill Requirements vs. Actual Drills Conducted (17 July 2018 - 12 July 2020)

Ship	Start of Availabilty	+ 30 Drill Due Date	Date Actual +30 Drill	First + 180 Drill Due Date	Date Actual +180 Drill	Second + 180 Drill Due Date	Date Actual +180 Drill	Third + 180 Drill Due Date	Date Actual +180 Drill	End of Availability Period
USS PAUL HAMILTON (DDG 60)	25-Jul-16	24-Aug-16		20-Feb-17		19-Aug-17		15-Feb-18		10-Aug-18
USS NEW ORLEANS (LPD 18)	9-Jan-17	8-Feb-17		7-Aug-17		3-Feb-18		2-Aug-18		4-Oct-18
USS FORT WORTH (LCS 3)	1-May-17	31-May-17	29-Nov-18	27-Nov-17		26-May-18		22-Nov-18		29-Mar-19
USS COWPENS (CG 63)	6-Jun-17	6-Jul-17		2-Jan-18		1-Jul-18		28-Dec-18		30-Aug-18
USS JACKSON (LCS 6)	29-Jun-17	29-Jul-17		25-Jan-18		24-Jul-18		20-Jan-19		31-Oct-18
USS MAKIN ISLAND (LHD 8)	31-Jul-17	30-Aug-17	31-Oct-18	26-Feb-18		25-Aug-18		21-Feb-19		30-Aug-19
USS CHOSIN (CG 65)	14-Aug-17	13-Sep-17		12-Mar-18		8-Sep-18		7-Mar-19		3-Jan-20
USS COMSTOCK (LSD 45)	28-Aug-17	27-Sep-17		26-Mar-18		22-Sep-18		21-Mar-19		13-May-19
USS JOHN FINN (DDG 113)	22-Jan-18	21-Feb-18		20-Aug-18		16-Feb-19		15-Aug-19		27-Jul-18
USS CHAMPION (MCM 4)	29-Jan-18	28-Feb-18	31-Jul-18	27-Aug-18	29-Jan-19	23-Feb-19		22-Aug-19		15-Oct-19
USS PINCKNEY (DDG 91)	12-Feb-18	14-Mar-18		10-Sep-18		9-Mar-19		5-Sep-19		31-Aug-18
USS GABRIELLE GIFFORDS (LCS 10)	26-Feb-18	28-Mar-18		24-Sep-18		23-Mar-19		19-Sep-19		30-Sep-18
USS HOWARD (DDG 83)	26-Feb-18	28-Mar-18	23-Aug-18	24-Sep-18		23-Mar-19		19-Sep-19		30-Sep-19
USS PRINCETON (CG 59)	5-Mar-18	4-Apr-18		1-Oct-18		30-Mar-19		26-Sep-19		27-Sep-18
USS AMERICA (LHA 6)	19-Mar-18	18-Apr-18		15-Oct-18		13-Apr-19		10-Oct-19		8-Mar-19
USS CAPE ST. GEORGE (CG 71)	19-Mar-18	18-Apr-18		15-Oct-18		13-Apr-19		10-Oct-19		29-Aug-19
USS PEARL HARBOR (LSD 52)	21-May-18	20-Jun-18	6-Nov-18	17-Dec-18		15-Jun-19		12-Dec-19		31-May-19
USS SAN DIEGO (LPD 22)	29-May-18	28-Jun-18	15-Nov-18	25-Dec-18		23-Jun-19		20-Dec-19		13-May-19
USS BUNKER HILL (CG 52)	25-Jun-18	25-Jul-18		21-Jan-19		20-Jul-19		16-Jan-20		14-Dec-18
USS OMAHA (LCS 12)	5-Jul-18	4-Aug-18	10-Aug-18	31-Jan-19		30-Jul-19		26-Jan-20		31-Mar-19
USS HIGGINS (DDG 76)	27-Aug-18	26-Sep-18	19-Sep-18	25-Mar-19	5-Mar-19	21-Sep-19	30-Jul-19	19-Mar-20		13-Mar-20
USS COWPENS (CG 63)	1-Oct-18	31-Oct-18		29-Apr-19		26-Oct-19		23-Apr-20		12-Jul-20
USS STERRETT (DDG 52)	5-Oct-18	4-Nov-18	8-Nov-18	3-May-19		30-Oct-19		27-Apr-20		28-Jun-19
USS BONHOMME RICHARD (LHD 6)	5-Nov-18	5-Dec-18	31-Jan-19	3-Jun-19	23-Jul-19	30-Nov-19		28-May-20		12-Jul-20
USS PORTLAND (LPD 27)	19-Nov-18	19-Dec-18	4-Dec-18	17-Jun-19	9-May-19	14-Dec-19		11-Jun-20		12-Jul-20
USS O'KANE (DDG 77)	14-Jan-19	13-Feb-19	12-Feb-19	12-Aug-19	16-Jul-19	8-Feb-20		6-Aug-20		10-Jun-20
USS DEWEY (DDG 105)	12-Feb-19	14-Mar-19	12-Mar-19	10-Sep-19		8-Mar-20		4-Sep-20		29-Nov-19
USS SHOUP (DDG 86)	04-Mar-19	3-Apr-19	16-Apr-19	30-Sep-19	23-Oct-19	28-Mar-20		24-Sep-20		12-Jul-20
USS SCOUT (MCM 8)	11-Mar-19	10-Apr-19		7-Oct-19		4-Apr-20		1-Oct-20		12-Jul-20
USS CORONADO (LCS 4)	12-Mar-19	11-Apr-19	21-Mar-19	8-Oct-19		5-Apr-20		2-Oct-20		13-Jan-20
USS MICHAEL MONSOOR (DDG 1001)	02-Apr-19	2-May-19	26-Apr-19	29-Oct-19		26-Apr-20		23-Oct-20		12-Jul-20
USS ESSEX (LHD 2)	08-Apr-19	8-May-19	2-May-19	4-Nov-19		2-May-20		29-Oct-20		6-Dec-19
USS RUSHMORE (LSD 47)	06-May-19	5-Jun-19	20-Jun-19	2-Dec-19	12-Feb-20	30-May-20		26-Nov-20		12-Jul-20
USS ANCHORAGE (LPD 23)	08-Jul-19	7-Aug-19	22-Aug-19	3-Feb-20		1-Aug-20		28-Jan-21		12-Jul-20
USS LAKE CHAMPLAIN (CG 57)	30-Sep-19	30-Oct-19	29-Oct-19	27-Apr-20		24-Oct-20		22-Apr-21		5-Jun-20
USS STETHEM (DDG 63)	01-Oct-19	31-Oct-19		28-Apr-20		25-Oct-20		23-Apr-21		12-Jul-20
USS DECATUR (DDG 73)	01-Oct-19	31-Oct-20	14-Nov-19	28-Apr-20		25-Oct-20		23-Apr-21		12-Jul-20
USS STOCKDALE (DDG 106)	18-Nov-19	18-Dec-19	5-Feb-20	15-Jun-20		12-Dec-20		10-Jun-21		11-May-20
USS STETHEM (DDG 63)	1-Oct-19	31-Oct-19	31-Oct-19	28-Apr-20		25-Oct-20		23-Apr-21		12-Jul-20
USS MOBILE BAY (CG 53)	3-Feb-20	4-Mar-20		31-Aug-20		27-Feb-21		26-Aug-21		12-Jul-20
USS JACKSON (LCS 6)	17-Feb-20	18-Mar-20		14-Sep-20		13-Mar-21		9-Sep-21		12-Jul-20
USS SPRUANCE (DDG 111)	17-Feb-20	18-Mar-20		14-Sep-20		13-Mar-21		9-Sep-21		12-Jul-20
USS HARPERS FERRY (LSD 49)	24-Feb-20	25-Mar-20		21-Sep-20		20-Mar-21		16-Sep-21		12-Jul-20
USS JOHN P MURTHA (LPD 26)	4-May-20	3-Jun-20		30-Nov-20		29-May-21		25-Nov-21		12-Jul-20
USS BOXER (LHD 4)	15-Jun-20	15-Jul-20		11-Jan-21		10-Jul-21		6-Jan-22		12-Jul-20

Key
No Drill Requirement Within Time Frame
No Drill Completed
Drill Completed After Due Date
Drill Completed Before Due Date

Appendix G: Explanation of Availability Process for Ship Maintenance

1. An availability is defined as the time when a U.S. Naval warship is made available to a maintenance activity (i.e., private shipyard or naval shipyard) for the accomplishment of maintenance and alterations. While there are different kinds of availabilities, generally, the ship is rendered incapable of fully performing its assigned missions and tasks due to the nature of the repair work. When the work is being performed by a maintenance activity, a Naval Supervisory Authority (NSA) is assigned, who is in charge of coordinating all the maintenance functions on hull, mechanical, electrical, and combat equipment and systems beyond the organizational capability or capacity of the ship.

2. A vessel's availability is a scheduled period of time, normally conducted in a shipyard, to perform maintenance on and modernization of the vessel and its systems. Navy maintenance is classified into three capability levels with each level increasing in capability required to perform the intended maintenance. The lowest maintenance level, organizational-level maintenance, consists of all maintenance actions within the capability of the ship's crew, known as Ship's Force. Typical organizational-level maintenance includes preventative maintenance (cleaning, lubricating, and operability testing) and corrective maintenance (component replacement and troubleshooting). This level of maintenance is promulgated by the ship-specific maintenance plan. The second level, intermediate-level maintenance, is defined as the maintenance requiring skills and facilities normally beyond those of the organizational level but does not require depot-level skills. Intermediate-level maintenance is performed by fleet maintenance activities (i.e., shore-based maintenance commands, naval shipyards, and Regional Maintenance Centers (RMC)) and is promulgated by the fleet commander or authorized representative. Maintenance periods requiring scheduling and accomplishment at the intermediate level are considered a non-Chief of Naval Operations (CNO) availability due to the nature of the repair work and ship's assigned tasking. Intermediate-level maintenance consists of but is not limited to all organizational-level maintenance, installation of alterations (modifications), provision of services (i.e., power, gas, and specific tools), and technical assistance to Ship's Force in diagnosing and repair. The highest maintenance level, depot-level maintenance, consists of maintenance requiring facilities and capabilities beyond the intermediate level and is performed by the public or private shipyards. Depot-level maintenance assignments are promulgated by the CNO and scheduled according to the ship-class specific maintenance plan. Depot-level maintenance periods are classified as CNO availabilities.

3. The planning phase for a CNO availability starts as far out as two years prior to the availability start date with the initial issue of the Availability Work Package (AWP). The AWP consists of maintenance actions, known interchangeably as work items or jobs, and ship alterations identified by Ship's Force, Naval Sea Systems Command (NAVSEA), and other supporting engineering commands, classified by codes. The initial AWP identifies the known work and class alterations that must be completed during the availability. Additional work items are identified and added to the AWP during work discovery periods scheduled during the planning phase. The discovery periods are conducted by Ship's Force with oversight and assists from the fleet support activities specializing in pre-availability testing and ship deficiency identification.

4. A CNO availability relies not only on one command, but rather multiple commands and supporting activities to ensure the successful planning and execution of the maintenance period. The CNO staff-level, maintains, reviews, and approves the maintenance program master plan for all class ships. At the Fleet and Type Commanders (TYCOMS) level, they maintain the depot maintenance intervals and cycles for ships under their command, and plan for and monitor availability executions to achieve a balance of cost and schedule. For NAVSEA, they are the lead technical authority, establishing performance standards for the accomplishment of all maintenance and modernizations, and ensuring the executing activities perform the repairs and modernization within the scope of the work authorized. The NSA coordinates and integrates all maintenance actions accomplished by all executing activities during a CNO availability and is responsible for the on-time completion of all work. The Lead Maintenance Activity (LMA) is responsible for all work being accomplished and possesses the authority to organize, structure, and coordinate all execution matters. The executing activities are the specific commands and private companies contracted to perform certain maintenance actions during the availability. Finally, Ship's Force is required to maintain open communication and provide support, when needed, to the NSA and the executing activities.

Appendix H: Glossary

Term	Definition
Acetylene Gas Systems	A colorless, combustible gas with a distinctive, garlic-like odor (C2H2).
Aft	The stern of a ship.
Aircraft Rescue Firefighting	The firefighting actions taken by fire and emergency services personnel to control or extinguish fire involving, or adjacent to, aircraft on the ground.
Alarm System	Generic term for any initiating device and/or notification appliances. In some cases, a single locally-produced component could serve as both an initiating device and notification appliance.
Automatic Sprinkler System	A fire extinguishing system with pipes and automatically activating heads which distributes water or water-based extinguishing agents over a fire area.
Availability	Any maintenance, modernization period where industrial work is performed/managed by a Lead Maintenance Activity (LMA).
B Phase Ground	This is a system in which the transformer secondary is delta-connected with one corner of the delta solidly grounded. Also referred to as corner-grounded delta systems, grounded phase services and end-grounded delta systems.
Basic Life Support	A level of hospital emergency medical care that includes any or all Emergency Medical Responder (EMR) and Emergency Medical Technician (EMT) procedures as defined by the U.S. Department of Transportation (USDOT) and National Highway Traffic Safety Administration (NHTSA) National Standard Curricula.

Batt Phone	An individual-to-individual call system using four digit phone numbers.
Berth	Designated location in a port or harbor where a ship is moored while it is not at sea.
Casualty Control System (CASCON)	The shipboard system that replaces the ship's permanent casualty reporting, announcing, and communication system; used to report fires inside the ship to the central location (i.e., the CASCON Station).
Chief of Naval Operations (CNO) Scheduled Availability	Maintenance, modernization periods where industrial work is performed that are scheduled by the CNO. Examples include Regular Overhaul, Complex Overhaul, Engineered Overhaul, Refueling Overhaul, Refueling Complex Overhaul, Engineered Refueling Overhaul, Depot Modernization Period, Planned Incremental Availability, Docking Planned Incremental Availability, Selected Restricted Availability (SRA), Docking SRA, Phased Maintenance Availability, Docking Phased Maintenance Availability, Extended SRA, Extended Docking SRA, Incremental SRA, Interim Drydock Availability (IDD), Pre-Inactivation Restricted Availability (PIRA), and Inactivation Availability.
Class "A" Fire	Class "A" fires involve wood and wood products, cloth, textiles and fibrous materials, paper and paper products.
Class "B" Fire	Class "B" fires involve flammable and combustible liquids such as gasoline, diesel fuel (F-76), jet fuels, hydraulic fluid and lube oil. Class "B" fires also involve flammable gases, such as acetylene.

Class "C" Fire	Class "C" fires are energized electrical fires.
Class "D" Fire	Class "D" fires involve combustible metals, such as magnesium and titanium.
Cofferdam	Any plug, patch, or dry chamber installed externally to the hull of a ship or submarine at or below the waterline in order to secure or dewater an area or system to enable shipboard or diver personnel to conduct maintenance or repairs to the hull or system. They could be as simple as a wooden plug inserted into a round opening or as complex as a dry chamber for a shaft coating repair.
Combustible	A material that, in the form in which it is used and under the conditions anticipated, will ignite and burn; a material that does not meet the definition of noncombustible or limited-combustible; or any liquid that has a closed cup flash point at or above 150 degrees Fahrenheit, as determined by National Fire Protection Association (NFPA) Codes and Standards 30, Flammable and Combustible Liquids Code. The terminology of “flammable” and “combustible” liquid is sometimes used interchangeably due to differing definitions in industry, regulatory bodies, and the military.
Company	A group of members under direct control of an officer, who are trained and equipped to perform assigned tasks.
Consolidated	A fire department that serves more than one installation command, e.g., multiple installments that are collocated in the same geographical area. The consolidated fire department is managed by a single fire and emergency services staff.

Coveralls	A loose-fitting, one-piece work garment, consisting of a trouser-like portion and a top with or without sleeves, worn over other clothing.
Damage Control (DC) Central	The central location where reports from shipboard repair parties (fire responders) are received, the overall condition of the ship is evaluated and corrective actions to be taken are directed in the most effective manner. Graphic records of the damage are made on various DC diagrams and status boards as reports are received. During large availabilities, DC Central may be moved off the ship.
Disaster Response	The portion of the fire and emergency services program that deals with controlling and mitigating unforeseen incidents, which exceed the affected installation's normal capabilities.
Dispatch Time	The point of receipt of the emergency alarm at the public safety answering point to the where sufficient information is known to the dispatcher and applicable units are notified of the emergency.
Emergency Dispatch Center	The central location in the region (Federal or civilian) that receives emergency calls and dispatches Fire & Emergency Services (F&ES). The emergency dispatch center is equivalent to the Region or Installation emergency dispatch center, and may also be referred to as the Public Safety Access Point (PSAP).
Emergency Medical Responder	An individual trained to provide initial care for sick or injured persons, per the U.S. DoT and NHTSA National Standard Curricula.
Emergency Medical Services (EMS)	A system of trained, certified, and properly equipped personnel that

	provide triage, treatment, and transportation of the sick and injured to Medical Treatment Facilities (MTF).
Emergency Operations Center (EOC)	The site from which Navy Installations or civil government officials (municipal, county, State and Federal) exercise direction and control in an emergency. The Installation EOC is a National Incident Management System (NIMS)-compliant multi-agency coordination system utilizing the Incident/Unified Command System's (ISC) organizational structure to provide an Installation staff to support execution of the Installation Emergency Management (EM) Plan, Anti-Terrorism (AT) Plan, other supporting plans, Defense Support to Civil Authorities (DSCA) missions, the Operational Plans of assigned Combatant, Component, & Fleet Commanders, and the National Response Plan. The mission of the Installation EOC is to support the Incident Commander (IC) or Unified Commander (UC) during emergencies with resource management support and establishing strategic/operational-level objectives, as necessary. The EOC is responsible for coordination and liaison with local, other service, and/or private response and recovery assets. From the Installation EOC, the Installation Commanding Officer (CO) exercises and executes Operational Control (OPCON) over all assigned Installation assets and may reallocate those assets on its own volition to support affected areas during an emergency.
Emergency Response Team (ERT)	Ship Repair and/or Construction Activity (SRCA), Ship's Force and

	F&ES personnel who respond to major fires and constitute the incident management structure.
Engine Company	A complement of emergency response personnel staffing a fire department pumper. The engine company's primary role during fire incidents is to establish a water supply and deliver water through hose lines to control the fire.
Fire and Emergency Services (F&ES)	The organization responsible for the primary response to fires. The civilian (federal or otherwise) fire department.
Fire and Emergency Services (F&ES) Chief	An individual who is responsible for a single or multiple commands and may be responsible to multiple COs.
Fire Boundary	A fire boundary is a temporary boundary set during a fire by immediate fire responders or firefighters by closing doors, hatches, and other closures.
Fire Investigation	An examination of a fire scene to determine the origin and cause of the fire, any special circumstance surrounding the fire, and to develop lessons learned. A fire investigation may also serve as the basis for a criminal investigation if the fire is determined to be of incendiary or suspicious origin.
Fire Prevention	The portion of the fire protection program aimed at preventing the outbreak of fire through education, inspection, enforcement, and investigation.
Fire Protection Systems	Equipment installed in buildings and other structures designed to detect fires, provide alarm indication of fire or to control or extinguish fires.
Fire Response Plan	Plan required by Occupational Safety and Health Standards for Shipyard Employment, 29 Code of Federal Regulations (CFR) Part 1915 Subpart P, Fire Protection in

	Shipyard Employment, that establishes in advance the actions to be taken at the time of a fire.
Fire Safety Council	Collectively, the persons designated by the SRCA, the ship CO, the Naval Supervising Authority (NSA) and the Engineering Planning Department (EPD) Representative (when a Naval Shipyard is the LMA) (as assigned) to approve ship-specific configurations relevant to the requirements of this manual.
Fire Safety Officer (FSO)	The SRCA representative to the Fire Safety Council (FSC).
Fire Safety Watch (FSW)	The watchstanders assigned specific fire related watchstanding duties such as patrolling the ship and manning CASCON/DC Central/Quarterdeck. Usually FSWs are Ship's Force personnel on ships in commission and are SRCA personnel during new construction pre-commissioning and during inactivation and recycling availabilities after decommissioning.
Fire Suppression Systems	A fire protection system that automatically controls and suppresses fires including automatic sprinkler systems, wet and dry chemical systems, and foam systems.
Fire Zone Boundary	A fire zone boundary is a permanent, continuous, interior bulkhead or deck system designed to limit the passage of flame and smoke beyond a fire zone and provides protected staging areas for firefighters.
Firemain	Supplies water pressure for several other cruising and battle systems.
Halon	A fire extinguishing agent that uses fluorine, chlorine, bromine, or iodine based hydrocarbons to interfere with the combustion process.

Head	Ship's toilet.
Hog	Deviation of the keel from a straight line, in which the keel is concave downward.
Hot Work	Flame heating, welding, torch cutting, brazing, carbon arc gouging, and other operations that produce heat, by any means, of 400 degrees Fahrenheit or more.
Hot Work Permit	A permit used to authorize the use of welding, soldering or other open flame devices on Navy installations.
Hull	The frame or body of a ship or boat exclusive of masts, yards, sails, and rigging.
In-Service	Nuclear-powered ships are assigned an active status of In-Service approximately two to four weeks (two to four months for aircraft carriers) prior to the commencement of Sea Trials and maintain this status until commissioning.
Incident Command System (ICS)	A standardized incident EM construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. ICS is the standard organizational process used by F&ES departments.
Incident Commander (IC)	The individual responsible for all incident activities, including the development of strategies and tactics and the ordering, and the ordering

	and release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.
In-Hull	As it relates to the 8010 Manual, on-ship incident command staff.
Jacob's Ladder	Portable ladder, with rope or wire sides and wooden rungs, slung over the side for temporary use.
Lead Maintenance Activity (LMA)	The single activity responsible for integrating all maintenance and modernization on U.S. Naval ships during any type availability.
List	"Listing" is a nautical term to describe when a vessel takes on water and tilts to one side. A ship could list either to port (left) or starboard (right). By contrast, a ship is said to be "trimming" when she tips forward or backward.
Major Fire	A fire that has progressed beyond the incipient stage, beyond the ability of the initial responders (usually Ship's Force on ships in commission) to control, and is still not under control when the first hose team outfitted in SCBAs and Firefighting Ensembles (FFE) needs to be relieved. A multi-level fire is a major fire.
Mutual Aid	An agreement among emergency responders to lend assistance across jurisdictional boundaries. This may occur due to an emergency response that exceeds the capacity of local resources, such as a disaster or a multiple-alarm fire. Mutual aid includes those responders with whom a formal standing agreement exists for cooperative EM on a continuing basis. For example, a shipyard or Navy Region may have a Mutual Aid Agreement (MAA)

	with civilian municipal fire and emergency responders.
Mutual Aid Agreement (MAA)	An arrangement with neighboring jurisdictions that establishes joint response of designated emergency services apparatus and personnel on pre-determined incident types.
Naval Reactors Representative's Office	The Naval Reactors Representative's Office in the Naval Shipyard and Nuclear Capable Construction Shipyard responsible for oversight of Naval Nuclear Propulsion Plant (NNPP) matters.
Naval Supervising Authority (NSA)	The NSA is an echelon 3 command (e.g., Supervisors of Shipbuilding (SUPSHIP), Regional Maintenance Center (RMC) or naval shipyard) having inherent COMNAVSEASYSCOM technical and contracting warrants. The NSA is the single naval activity responsible for the contract administration, project management, technical authority and quality assurance of work accomplished by activities working within the assigned availability or new construction contract. The NSA would provide the oversight required to ensure that work in the assigned availability is authorized, controlled, executed and verified to be in compliance with applicable technical requirements and policies.
Off-Hull	As it relates to the 8010 Manual, off-ship incident command staff.
Operations Risk Management	The process of identifying, assessing, and controlling risks and making operational decisions that balance risk with mission benefit.

P-100	Self-priming, diesel-driven dewatering pumps that pump about 100 Gallons-Per-Minute (GPM).
P-250	Gasoline-driven pumps used for dewatering.
Personal Protective Equipment (PPE) and Clothing	PPE and clothing that meets the applicable NFPA requirements and are suitable for the tasks that emergency services personnel are expected to perform.
Pitch	Fore-and-aft angular motion of a ship's bow or stern in a seaway about the athwartships axis. See also "sway" and "yaw."
Port	The left-hand side of a ship when looking forward; the opposite of "starboard."
Project Support Engineer (PSE)	A PSE is the equivalent to a trouble-desk person at a naval shipyard. A PSE is an engineer assigned to a maintenance team. A PSE typically acts as a liaison between the waterfront operations and engineering, to help get engineering answers quickly.
Quay Wall	A quay wall is an earth retaining structure which is used to dock floating vessels and transfer goods.
Radiological Emergency Response Organization	Designated personnel at a Naval Nuclear Propulsion Program (NNPP) facility/organization who are assigned to respond to nuclear or radiological emergencies associated with U.S. nuclear-powered warships and associated radioactive material.
Regional Fire Department	A single fire department that services all installations in a region, which may include multiple installation fire and emergency stations organized and aligned under a CNIC recognized region.
Regional Maintenance Center (RMC)	A Navy activity that is an NSA when contracting for ship maintenance, and is a SRCA/LMA

	when performing shipboard maintenance.
Regional Operations Center (ROC)	A ROC is a NIMS-compliant multi-agency coordination system utilizing the Incident/Unified Command System's organizational structure to provide a collaboration point and operations center for Region staff to support execution of the Region Emergency Management (EM) Plan, Anti-Terrorism (AT) Plan, other supporting plans, DSCA missions, the Operational Plans of assigned Combatant, Component, & Fleet Commanders, and the National Response Plan. Activities include, but are not limited to, intelligence gathering, suspicious incident tracking, Common Operational Picture (COP) development & input, resource management, coordination with Federal/DoD/State/Local/Private/Host Nation agencies & department, and implementation of precautionary/preventive measures to deter/detect events and/or mitigate potential effects. Post-event activities include, but are not limited to, resource management, strategic guidance/direction, and coordination & liaison with Federal, Department of Defense, State, Local, Other Service, and/or Private (or host nation) response and recovery assets while supporting subordinate installations during emergencies. The function of the ROC is principally to establish strategic priorities for one or more incidents at the Installation level and allocate limited Regional/Installation resources among incident locations.
Repair Lockers (DCRS)	Storage spaces within the ship which contain DC equipment for the repair

	and control of damage due to battle, flooding, or fire.
Risk Analysis	A study of program elements posing a hazardous situation, to assess the probability and severity of an incident prior to devising a means of controlling the hazardous situation.
Roll	Side-to-side angular motion of a ship about its longitudinal axis. See also “pitch,” “sway,” and “yaw.”
Sag	Deviation of the keel from a straight line when the keel is concave upward. Also, the concave curve of a towline said to have catenary.
Scuttle	Small, quick-closing access hole.
Sea Trials	The testing phase of a ship.
Self-Contained Breathing Apparatus (SCBA)	A breathing air system that allows emergency services personnel to enter hazardous or oxygen deficient atmospheres.
Ship Repair and/or Construction Activity (SRCA)	The Shipbuilder or LMA that performs industrial work (maintenance, repair, modernization, inactivation, and/or construction) on Navy vessels. This includes Naval Shipyards, RMCs, Trident Refit Facilities (TRFs), Fleet Maintenance Activities (FMAs), private repair shipyards, and new construction shipyards.
Ship's Force	Members of ship's company.
Shoring	Process of placing props against a structure or cargo to prevent braking, sagging, or movement in a seaway, or to hold ship upright in dry dock.
Sideport	Used to transport cargo to the ship by forklift.
Situational Report (SITREP)	A special report generally in a prescribed format, required to keep higher authority advised. Required under certain predictable circumstances, but also may be required at any time.

SKED	Automated Planned Maintenance System Scheduling Tool.
Smoke Boundary	A smoke boundary is a bulkhead, deck, or other fume-tight boundary which is set during a fire to limit smoke spread and air supply to a fire.
Stability	Ability of a ship to right itself after being heeled over.
Starboard	The right-hand side of a ship when looking forward. Opposite of "port."
Stern Gate	Stern ramp/door that provides access to the Well Deck for landing craft and vehicles.
Submersible pump	Watertight electric pump that could be lowered into a flooded compartment to pump it out.
Sway	Motion of a ship in which it is displaced laterally, as distinct from rolling. See also "pitch," "roll," and "yaw."
Type III Navy Working Uniform (NWU)	An organizational uniform worn by all U.S. Navy members.
Watertight Bulkhead	Large bulkheads that split the hull of a ship into separate sections.
Wye Gate	A piping connection with a large inlet section and two smaller outlet sections to permit hook up of two hoses to one pump outlet.
Yaw	Failure of a vessel to hold a steady course because of forces of wind, sea, damage to vessel, etc. In towing, yaw angle is the difference between the tow's heading and the tug's heading. Yawing can be manifested by an oscillation of the tow's heading by a small angle to either side of the base course, with the tow remaining on the same track as the tug.

Appendix I: Acronym List

Acronym	Full Description
2M	Miniature/Microminiature Electronics Repair.
3M	Maintenance & Material Management System
AAR	After Action Report
ABT	Automatic Bus Transfer
ACDO	Assistant Command Duty Officer
ACE	Aircraft Elevator
ADCON	Administrative Control
AEL	Allowance Equipage List
AFFF	Aqueous Film Forming Foam
AIRFOR	Commander, Naval Air Forces
ALNAV	All Navy Message
ALT	Acquisition, Logistics and Technology
AMR	Auxiliary Machinery Room
AMS	Aviation Structural Mechanic Structures
AOR	Area of Responsibility
APCD	Air Pollution Control District
ASFP	Flying Squad/At-Sea Fire Party
ATF	Bureau of Alcohol, Tobacco Firearms and Explosives
ATFP	Anti-Terrorism Force Protection
ATG	Afloat Training Group
ATGPAC	Afloat Training Group Pacific
ATGSD	Afloat Training Group San Diego
ATHOC	AtHoc Emergency Mass Notification System
ATTWO	Anti-Terrorism Tactical Watch Officer
AWP	Availability Work Package
BA	Blitz Attack
BBD	Billet Based Distribution
BLS	Basic Life Support
BLUF	Bottom Line Up Front
BOC	Base Operations Center
C2	Command and Control
C3F	Commander, United States THIRD Fleet
C5I	Command, Control, Communications, Computers, Combat Systems & Intel
CAD	Computer-Aided Dispatch
CALFIRE	California Department of Forestry and Fire Protection
CALOES	California Office of Emergency Services
CAR	Corrective Action Report

CASCON	Casualty Control System
CASREP	Casualty Report
CAT	Crisis Action Team
CBRD	Chemical, Biological and Radiological Defense
CDO	Command Duty Officer
CE	Combat Electronics
CFR	Code of Federal Regulations
CHENG	Chief Engineer
CHT	Collection, Holding, Transfer
CIC	Combat Information Center
CIV	Civilian
CMAV	Continuous Maintenance Availability
CMF	Combined Maritime Forces
CNAF	Commander Naval Air Forces
CNAP	Commander Naval Air Force, United States Pacific Fleet
CNIC	Commander, Navy Installation Command
CNO	Chief of Naval Operations
CNRMC	Commander, Navy Region Maintenance Center
CNRSW	Commander, Navy Region Southwest
CNSF	Commander, Naval Surface Forces
CNSL	Commander, Naval Surface Force Atlantic
CNSP	Commander, Naval Surface Force Pacific Fleet
CO	Commanding Officer
COMNAVSAFECEN NOR VA	Commander, Naval Safety Center Norfolk Virginia
COMNAVSURFLANT	Commander, Naval Surface Force Atlantic
COMNAVSURFPAC	Commander, Naval Surface Force Pacific
COMPACFLT	Commander, United States Pacific Fleet
COMSUBLANT	Commander, Submarine Force Atlantic
COMSUBPAC	Commander, Submarine Force Pacific
COMTHRDFLT	Commander, United States THIRD Fleet
COMUSFLTFORMCOM	Commander, United States Fleet Forces Command
CONEX	Container Express
CONUS	Continental United States
COOP	Continuity of Operations
COP	Common Operational Picture
COS	Chief of Staff
COVID-19	Coronavirus Disease-2019
CPF	Commander, Pacific Fleet
CPO	Chief Petty Officer
CPU	Computer Processing Unit

CSG-1	Carrier Strike Group ONE
CSPCD	Combat Systems Production Complete Date
CTS	Command Tasker System
CUSFFC	Commander, United States Fleet Forces Command
CVN	Nuclear Aircraft Carrier
CWO	Chief Warrant Officer
DC	Damage Control
DC Central	Damage Control Central
DCA	Damage Control Assistant
DCASE	Damage Control Assistant - Senior Enlisted
DCBOD	Damage Control Board of Directors
DCMA	Damage Control Material Assessment
DCRS	Damage Control Repair Station
DCTT	Damage Control Training Team
DDG	Guided Missile Destroyer
DFM	Diesel Fuel, Marine
DFR	Damage & Fire Recoverability
DFS	Departure From Specification
DHS	Department of Homeland Security
D-Level	Depot-Level
DOD	Department of Defense
DoN	Department of the Navy
DPG	Defense Planning Guidance
DPMA	Docking Phased Maintenance Availability
DSCA	Defense Support to Civil Authorities
EA	Executive Assistant
EAP	Engineering Assessments Pacific
EBAC	Emergency Breathing Air Compressor
ECC	Emergency Command Center
ECP	Entry Control Point
ED	Executive Director
EDG	Emergency Diesel Generator
EDO	Engineering Duty Officer
EEBD	Emergency Escape Breathing Device
EFR	Engineering Field Representative
EM	Emergency Management
EMO	Emergency Management Officer
EMR	Emergency Medical Responder
EMS	Emergency Medical Services
EMT	Emergency Medical Technician

EOC	Emergency Operations Center
EOD	Explosive Ordinance Disposal
EOOW	Engineering Officer of the Watch
EPA	Environmental Protection Agency
EPCC	Electric Plant Control Console
EPD	Engineering Planning Department
ER	Emergency Room
ER04	Engineering Repair Workcenter 04
ER09	Engineering Repair Workcenter 09 (Damage Control Petty Officer)
ERT	Emergency Response Team
ESAMS	Enterprise Safety Applications Management System
ESG-3	Expeditionary Strike Group THREE
ESH	Environmental Safety & Health
ESSM	Emergency Ship Salvage Material
ETA	Estimated Time of Arrival
F&ES	Fire and Emergency Service
FAA	Federal Aviation Administration
FEDFIRE	Federal Firefighting Department
FEMA	Federal Emergency Management Agency
FF	Firefighter
FFE	Firefighting Ensemble
FITREP	Fitness Report
FLIR	Forward Looking Infrared
FLTMPS	Fleet Training Management and Planning System
FMA	Fleet Maintenance Activity
FMAA	Fleet Maintenance Activity Assessment
FRAGO/FRAGORD	Fragmentary Order
FRB	Failure Review Board
FRE	Final Regulatory Evaluation
FRM	Frame
FRP	Fire Response Plan
FRV	Flame Resistant Variant
FSC	Fire Safety Council
FSO	Fire Safety Officer
FSP	Fire Safety Plan
FSW	Fire Safety Watch
FTA	Fleet Technical Assistance
FTS	Full-Time Support
FWD	Forward
FY	Fiscal Year

GEARS	Global Electronic Approval Routing System
GFSO	Government Fire Safety Officer
GMO	General Medical Officer
GPC	Global Phillips Cartner
GPM	Gallons-Per-Minute
GS	General Schedule
H2S	Hydrogen Sulfide
HAR	Hazard Assessment Report
HAS	Hazard-Specific Appendix
HFP	Heptafluoropropane
HPAC	High-Pressure Air Compressor
HPCON	Health Protection Condition
HPD	Headquarters Policy Directive
HPWM	High-Pressure Water Mist
HQ	Headquarters
HRMC	Hawaii Regional Maintenance Center
HYDRA	Hierarchical Yet Dynamically Reprogrammable Architecture
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IDD	Interim Drydock Availability
IDLH	Inherently Dangerous to Life & Health
IEM	Inactive Equipment Maintenance
IET	Inport Emergency Team
I-Level	Intermediate Level
IMO	International Maritime Organization
IMT	Incident Management Team
INSURV	Board of Inspection and Survey
IPTD	Integrated Project Team Development
IRCP	Interoperability Radio Communication Plan
ISEA	In Service Engineering Agent
ISIC	Immediate Superior In Command
ITO	Installation Training Officer
IVCS	Integrated Voice Communication System
IVO	In Vicinity Of
JAGC	Judge Advocate General Corps
JAGMAN	Manual of the Judge Advocate General
JIC	Joint Intelligence Center
JP-5	Fuel, Jet Propulsion

JQR	Job Qualification Requirement
LDO	Limited Duty Officer
LHA	Landing Helicopter Assault
LHD	Landing Helicopter Dock
LMA	Lead Maintenance Activity
LO	Lube Oil
LOA	Light-Off Assessment
Lower V	Lower Vehicle Stowage Area
LP	Low-Pressure
LPD	Landing Platform/Dock
LPO	Leading Petty Officer
LSD	Dock Landing Ship
MA	Material Assessment
MAA	Mutual Aid Agreement
MAC-MO	Multi-Award Contract/Multi-Order
MAO	Medical Administration Officer
MARMC	Mid-Atlantic Regional Maintenance Center
MC	Main Circuit
MCAS	Marine Corps Air Station
MCPON	Master Chief Petty Officer of the Navy
MCRD	Marine Corps Recruit Depot
MDO	Maintenance Duty Officer
MEF	Marine Expeditionary Forces
MFD	Miramar Fire Department
MIP	Maintenance Index Page
MM	Millimeter
MMR	Main Machinery Room
MOA	Memorandum of Agreement
MOB-D	Mobility-Damage Control
MOU	Memorandum of Understanding
MSMO	Multi-Ship Multi Option
MTE	Man, Train & Equip
MTF	Military Treatment Facility
NASSCO	General Dynamics National Steel and Shipbuilding Company
NAVCRUITRACOM	Navy Recruit Training Command
NAVFAC	Naval Facilities Engineering Systems Command
NAVOSH	Navy Occupational Safety & Health
NAVSAFCEN	Naval Safety Center
NAVSEA	Naval Sea Systems Command

NAVSEA 00C	Naval Sea Systems Command, Director of Ocean Engineering/Supervisor o (SUPSALV)
NAVSEA 07B	Naval Sea Systems Command Undersea Warfare
NBSD	Naval Base San Diego
NCFD	National City Fire Department
NCIS	Naval Criminal Investigative Service
NETC	Naval Training & Education Command
NFIRS	National Fire Incident Reporting System
NFPA	National Fire Protection Association
NFTI	Naval Firefighting Thermal Imaging
NHTSA	National Highway Traffic Safety Administration
NIMS	National ManagemIncident ent System
NMCI	Navy & Marine Corps Intranet
NNPP	Naval Nuclear Propulsion Program
NRF	National Response Framework
NRMO	Navy Regional Maintenance Office
NRRO	Naval Reactors Representative Office
NRT	National Response Team
NSA	Naval Supervising Authority
NSF	Naval Security Force
NSI	NAVSEA Standard Item
NSIRC	NAVSEA Ship Incident Response Center
NSRO	NAVSEA Shipyard Representative Office
NSWCPD	Naval Surface Warfare Center, Philadelphia Division
NSY	Naval Shipyard
NWRMC	Northwest Regional Maintenance Center
NWU	Navy Working Uniform
OFRP	Optimized Fleet Response Plan
OJAG	Office of the Judge Advocate General
OOC	Out of Commission
OOD	Officer of the Deck
OPCON	Operational Control
OPNAV	Office of the Chief of Naval Operations
OSD	Office of the Secretary of Defense
OSPR	California Office of Spill Prevention and Response
PAO	Public Affairs Officer
PAX	Passengers
PB4M	Planning Board for Maintenance
PCA	Program Compliance Assessment
PCD	Planned Completion Date

PCO	Procurement Contracting Officer
PECU	Portable Exothermic Cutting Unit
PEO	Program Executive Officer
PHIBRON	Amphibious Squadron
PHIBRON-1	Commander, Amphibious Squadron ONE
PHIBRON-5	Commander, Amphibious Squadron FIVE
PIRA	Pre-Inactivation Restricted Availability
PKP	Potassium Bicarbonate
PLANORD	Planning Order
PM	Project Manager
PMA	Phased Maintenance Activities
PMS	Planned Maintenance System
PNSY	Portsmouth Naval Shipyard
POM	Program Objective Memorandum
PPBE	Program, Planning, Budget & Execution
PPE	Personal Protective Equipment
PPM	Parts-Per-Million
PQS	Personnel Qualification Standard
PSAP	Public Safety Access Point
PSE	Project Support Engineer
PSI	Pounds-Per-Square-Inch
PSNS	Puget Sound Naval Shipyard
PT	Project Team
PW	Public Works
PWAY	Passageway
PWO	Public Works Officer
R&A	Rescue & Assistance
RADM	Relational Administrative Data Management System / Rear Admiral
RAM	Upper Rotary Axial Water Driven Fan
RAS	Replenishment at Sea
RCS	Regional Communications Systems
RDC	Region Dispatch Center
RE	Recurring Event
READ-E 3	Readiness Evaluation #
RFS	Request for Support
RIC	Rapid Intervention Crew
RLSO	Region Legal Service Office Southwest
RMC	MaintenanceRegional Center
ROC	Regional Operations Center
ROC-POE	Required Operational Capabilities and Projected Operational Environment

ROM	Restriction of Movement
SA	Situational Awareness
SACC	Supporting Arms Coordination Center
SAR	Search and Rescue
SAT	Satisfactory
SBS	Shipbuilding Specialist
SCBA	Self-Contained Breathing Apparatus
SCORE	Southern California Offshore Range
SDFD	San Diego Fire Department
SDM	Ship Design Manager
SDO	Squadron Duty Officer
SEA 05	Naval Systems Engineering Directorate
SEA 21	Director of Surface Ship Maintenance and Modernization
SECNAV	Secretary of the Navy
SERMAC	Southeast Regional Maintenance Center
SFTRM	Surface Force Training & Readiness Manual
SHIPALT	Ship Alteration
SIB	Safety Investigation Board
SIQ	Sick-in-Quarters
SITREP	Situation Report
SMO	Senior Medical Officer
SOG	Standard Operating Guide
SOP	Standard Operating Procedure
SOPV	Solenoid Operated Pilot Valves
SPG	Service Program Guidance
SRA	Selected Restricted Availability
SRCA	Ship Repair and/or Construction Activity
SRF	Ship Repair Facility
SSCL	Senior Shore Leader Course
SSN	Ship, Submersible, Nuclear
SSRAC	Standard Specification for Ship Repair & Alteration Committee
STBD	Starboard
SUBFOR	Commander, Submarine Forces
SUBLANT	Commander, Submarine Force Atlantic
SUBPAC	Commander, Submarine Force, U.S. Pacific Fleet
SUPSALV	Supervisor of Salvage and Diving
SUPSHIPS	Supervisors of Shipbuilding
SURFOR	Commander, Naval Surface Forces
SUV	Sports Utility Vehicle
SWO	Surface Warfare Officer / Senior Watch Officer

SWOS	Surface Warfare Officer School
SWRMC	Southwest Regional Maintenance Center
SWSC	Surface Warfare Schools Command
SYSCOM	Systems Command
TAD	Temporary Additional Duty
TCCD	Training Course Control Document
TIC	Thermal Imaging Camera
TORIS	Training & Operational Readiness Information Services
TORIS-TFOM	Training & Operational Readiness Information Services-Training Figure of
TRF	Trident Refit Facilities
TSO	Temporary Standing Order
TWH	Technical Warrant Holder
TYCOM	Type Commander
U/I	Under Instruction
UC	Unified Commander
UFC	Unified Facilities Criteria
UNSAT	Unsatisfactory
Upper V	Upper Vehicle Stowage Area
UPS	Uninterrupted Power Supply
USAR	Urban Search and Rescue Team
USCG	U.S. Coast Guard
USDOT	United States Department of Transportation
USMC	U.S. Marine Corps
USN	United States Navy
USNORTHCOM	U.S. Northern Command
USS Inc.	United Support Services, Inc.
VOC	Volatile Organic Compound
WBC	Watchbill Coordinator
WCS	Work Center Supervisor
WESS	Web Enable Safety System
XO	Executive Officer

Appendix J: Navy Enlisted Ratings

Abbreviation	Full Term
ABE	Aviation Boatswain’s Mate, Equipment
AG	Aerographer’s Mate
AO	Aviation Ordnanceman
DC	Damage Controlman
PR	Aircrew Survival Equipmentman
AW	Aircrewman
AWF	Aircrewman Mechanical
AWO	Aircrewman Operator
AWR	Aircrewman Tactical Helicopter
AWS	Aircrewman Helicopter
AWV	Aircrewman Avionics
AN	Airman
AC	Air Traffic Controller
ABF	Aviation Boatswain’s Mate, Fuels
AB	Aviation Boatswain’s Mate, Handling
AE	Aviation Electrician’s Mate
AT	Aviation Electronics Technician
AD	Aviation Machinist’s Mate
AZ	Aviation Maintenance Administration Man
AM	Aviation Structural Mechanic
AME	Aviation Structural Mechanic, Equipment
AS	Aviation Support Equipment Technician
BM	Boatswain’s Mate
BU	Builder
CE	Construction Electrician
CM	Construction Mechanic
CTI	Cryptologic Technician Interpretive
CTT	Cryptologic Technician Technical
CTR	Cryptologic Technician Collection
CTM	Cryptologic Technician Maintenance
CTN	Cryptologic Technician Networks
CS	Culinary Specialist
EM	Electrician's Mate
ET	Electronics Technician
EA	Engineering Aide
EN	Engineman
EO	Equipment Operator
FC	Fire Controlman
FN	Fireman
GSE	Gas Turbine Systems Technician Electrical

GSM	Gas Turbine Systems Technician Mechanical
GM	Gunner’s Mate
HM	Hospital Corpsman
HT	Hull Maintenance Technician
IT	Information Systems Technician
IS	Intelligence Specialist
IC	Interior Communications Electrician
LN	Legalman
LS	Logistics Specialist
MR	Machinery Repairman
MM	Machinist’s Mate
MC	Mass Communication Specialist
MA	Master-At-Arms
MN	Mineman
MT	Missile Technician
MU	Musician
NC	Navy Counselor
ND	Navy Diver
OS	Operations Specialist
PS	Personnel Specialist
QM	Quartermaster
RP	Religious Program Specialist
SN	Seaman
SH	Ship’s Serviceman
ST	Sonar Technician
STG	Sonar Technician - Surface
SWCC	Special Warfare Boat Operator
SO	Special Warfare Operator
SW	Steelworker
UCT	Underwater Construction Team
UT	Utilitiesman
YN	Yeoman

Appendix K: Members of the Command Investigation Team

Name / Rank	Designator / Rate / Title	Command / Organization
VADM Scott Conn	1320	COMTHIRDFLT
VADM DeWolfe Miller	1320	COMNAVAIRPAC
RDML Timothy Kott	1110	COMCARSTRKGRU 1
(b) (6)	1110	COMCARSTRKGRU 7
(b) (6)	1110	TACTRAGRUPAC
(b) (6)	2500	RLSO SOUTHWEST
(b) (6)	1310	COMNAVAIRPAC
(b) (6)	1110	COMDESRON 21
(b) (6)	1310	COMPHIPBRON 6
(b) (6)	1110	OFFICE OF THE ASSISTANT SECRETARY OF THE NAVY
(b) (6)	1110	AFLOATRAGRU PACIFIC
(b) (6)	1110	COMNAVAIRPAC
(b) (6)	1310	TACTRAGRUPAC
(b) (6)	1110	COMTHIRDFLT

(b) (6)	6130	COMEXSTRKGRU 2
(b) (6)	6130	BEACHMASTER UNIT 1 SEA COMP
(b) (6)	2500	RLSO SOUTHWEST
(b) (6)	1440	COMNAVAIRPAC
(b) (6)	1110	AFLOATRAGRU PACIFIC
(b) (6)	1110	AFLOATRAGRU PACIFIC
(b) (6)	1110	COMNAVSURFPAC
(b) (6)	1710	JFC NAPLES
(b) (6)	6130	COMNAVSURFPAC
(b) (6)	6200	COMNAVAIRPAC
(b) (6)	2500	RLSO SOUTHWEST
(b) (6)	2500	RLSO SOUTHWEST
(b) (6)	1110	AFLOATRAGRU PACIFIC
(b) (6)	1110	EWTG PACIFIC
(b) (6)	6180	NAVSEA MARITIME C4I SYSTEMS

(b) (6)	1110	ENGASMPAC
(b) (6)	6200	COMNAVAIRPAC
(b) (6)	1110	CENSURFCOMBATSYS TRNG
(b) (6)	1310	COMCARSTRKGRU
(b) (6)	2500	RLSO SOUTHWEST
(b) (6)	1310	COMCARSTRKGRU 1
(b) (6)	1710	COMNAVSURFPAC
(b) (6)	1110	COMNAVSURFPAC
(b) (6)	1110	AFLOATRAGRU PACIFIC
(b) (6)	2500	RLSO SOUTHWEST
(b) (6)	1110	DDG-91 PINCKNEY
(b) (6)	1160	COMNAVSURFPAC
(b) (6)	7131	NAVAL SMALL CRAFT INSTRUCTION TECHNICAL TRNG SCOL SEA COMP
(b) (6)	7411	HSM-78 HELMARSTRKRON
(b) (6)	Command Master Chief	DDG-106 STOCKDALE

(b) (6)	Command Master Chief	COMCARSTRKGRU 1
(b) (6)	Damage Controlman	COMNAVAIRLANT
(b) (6)	Damage Controlman	AFLOATRAGRU PACIFIC
(b) (6)	Hull Technician	NIWC PACIFIC
(b) (6)	Information Systems Technician	COMCARSTRKGRU 1
(b) (6)	Information Systems Technician	COMCARSTRKGRU 1
(b) (6)	Legalman	AFLOATRAGRU PACIFIC
(b) (6)	Yeoman	CG 57 LAKE CHAMPLAIN
(b) (6)	Legalman	COMTHIRDFLT
(b) (6)	Yeoman	HSM-41HELMARSTRKRON
(b) (6)	Yeoman	COMCARSTRKGRU 1
(b) (6)	Yeoman	DDG-76 HIGGINS
(b) (6)	Yeoman	HSM-78 HELMARSTRKRON

(b) (6)	Sonar Technician	AFLOATRAGRU PACIFIC
(b) (6)	Electrician's Mate	AFLOATRAGRU PACIFIC
(b) (6)	Electrician's Mate	AFLOATRAGRU PACIFIC
(b) (6)	Boatswain's Mate	AFLOATRAGRU PACIFIC
(b) (6)	Master at Arms	AFLOATRAGRU PACIFIC
(b) (6)	Legalman	RLSO SOUTHWEST
(b) (6)	Machinist's Mate	DEFSVCOFF WEST SAN DIEGO
(b) (6)	Mass Communication Specialist	CVN-70 CARL VINSON
(b) (6)	Information Systems Technician	CG-57 LAKE CHAMPLAIN
(b) (6)	Civilian	CNIC
(b) (6)	Civilian	NAVSEA 05D
(b) (6)	Civilian	CNSL
(b) (6)	Civilian	USMMA

(b) (6)	Civilian	USMMA, FDNY