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From: CAPT Michael A. McCartney, U.S. Navy Party Representative
To: National Transportation Safety Board

Subj: U.S. NAVY SUBMISSION TO THE NATIONAL TRANSPORTATION SAFETY BOARD MARINE ACCIDENT FACTUAL REPORT INTO THE COLLISION OF ACX CRYSTAL AND USS FITZGERALD (DDG-62)

Ref: (a) National Transportation Safety Board, Marine Accident Report, Collision Between U.S. Navy Destroyer Fitzgerald and Container Ship ACX Crystal
(b) Navy Collision Memorandum for Distribution of 23 Oct 17
(c) Comprehensive Review of Surface Fleet Incidents of 26 Oct 17
(d) Philippines Maritime Industry Authority Interim Safety Investigation Report
(e) Japan Transport Safety Board Investigation of 29 Aug 19
(f) USCG Preliminary Investigation Report of 28 Jul 17

1. These comments are based on our review of the draft Marine Accident Report (MAR) into the collision between ACX CRYSTAL (CRYSTAL) and USS FITZGERALD (DDG-62) (FTZ) that occurred on June 17, 2017, reference (a). They are respectfully submitted to assist the National Transportation Safety Board (NTSB) with its mandate to improve maritime safety, and promote safety recommendations.

2. The Navy fully acknowledged, documented, and addressed our deficiencies that contributed to this tragic mishap. Reference (b) is our public assessment of U.S. Navy sub-standard actions preceding the collision. Reference (c) is the Navy's top-down Comprehensive Review (CR) of this incident and other incidents. We also conducted a Strategic Readiness Review (SRR). Specifically, the Navy recognized the need to address larger issues regarding safety, manning, training, operations, equipment, governance, funding, and command and control. The Readiness Reform and Oversight Council (RROC) was established to facilitate implementation of 111 CR/SRR recommendations, many of which directly address the shortfalls indicated within the scope of NTSB's investigation and, in some cases, go beyond them. The RROC's commitment to enabling a new readiness standard for the Navy has improved, and will continue to improve, safety and operations for our Sailors and ships across the fleet. These standards have measurable, concrete outcomes that allow us to constantly improve our surface force.

3. Initial RROC efforts focused on a validation of "Safe to Operate," during which the Navy leveraged CR/SRR recommendations to implement immediate actions that enhanced readiness and risk management. Key initiatives included:

a) Completed fleet-wide Officer-Of-The-Deck (OOD) competency checks.

b) Conducted Ready for Sea Assessments commencing with Forward Deployed Naval Forces – Japan (FDNF-J) ships and extending to other CONUS/O-CONUS locations.
c) Established Commander, Naval Surface Group West Pacific (CNSGWP) as the type commander's executive agent for manning, training, and equipping of Yokosuka-based ships.
d) Promulgated Automated Identification System (AIS) guidance unique to each numbered fleet area of operation.
e) Upgraded the training of navigation fundamentals and bridge resource management.
f) Increased the manning of FDNF-J ships.
g) Instituted a comprehensive fatigue management policy, including an individual crew risk management tool.
h) Promulgated 22 class advisories covering all bridge control system configurations in normal and casualty conditions.
i) Revised surface warfare officer (SWO) career path to maximize shipboard experience at sea and enhance the training/assessment continuum across each career milestone.

4. The RROC is leading the way in implementing new readiness standards for a safer and operationally-sound Navy. The two overarching goals of our readiness reforms are (1) to implement standards for safer, more effective operations across the Fleet, and (2) to reinforce a mindset shift from a culture of compliance to a culture of excellence. The RROC implemented 106 of the CR/SRR recommendations, and transitioned 96 of those to the oversight of the most appropriate Fleet stakeholders for execution. The RROC expects to implement and transition the remaining recommendations by December 2020. The Navy has completed almost all remedial reforms and made progress on the remaining internal review recommendations. We also have an enduring commitment to reinforce current readiness reforms and integrate additional reforms as new technologies and training requirements emerge. Due to the efforts of many professionals around the Fleet and the dedication of our Sailors, our Navy operates more safely and effectively today than it did in 2017.

5. We noted with appreciation the safety investigations conducted by the Republic of the Philippines Maritime Industry Authority (MARINA), as Flag State, reference (d), and the Japan Transport Safety Board (JTSB) as Coastal State, reference (e). They appropriately identify the Navy's contributing causes to the collision, but also conclude that effective action by CRYSTAL, as stand-on vessel, could have avoided or mitigated this mishap.[1] While lack of situational awareness on the part of FTZ watchstanders created the collision risk, CRYSTAL was fully aware of the risk, yet steamed into the collision despite having time to change course after realizing that FTZ did not see them.[2] While FTZ was obligated to keep out of the way, CRYSTAL was obligated to take action when it became clear a collision could not be avoided without her own maneuver.

6. NTSB's report would benefit maritime safety if it addressed the importance of vessels correctly and urgently communicating doubts regarding the intentions of another vessel, especially when a risk of collision exists. CRYSTAL used a signal light to indicate she was in

doubt as to whether FTZ was taking sufficient action to avoid a collision. Proper COLREG 34 (d) compliance of at least five short and rapid blasts using her whistle may have alerted FTZ and all other nearby ships of a rapidly developing dangerous maneuvering situation. Ship's whistle and other signaling methods, including vessel bridge-to-bridge radiotelephone communications, could have alerted FTZ's bridge team of danger in time for them to take effective evasive action.[3] CRYSTAL was unsuccessful in warning FTZ, yet took no maneuvering action, and did not take preparatory actions for maneuvering in congested waters, such as switching from autopilot to manual steering.[4] Publishing clear recommendations on mandatory and permissive stand-on vessel collision avoidance maneuvering and signaling under COLREG Rules 8, 17 and 34 would make this important coastal and flag state finding more actionable and would be of great service in preventing future collisions.

7. The Navy acknowledges that the catalyst of the collision was FTZ's loss of situational awareness, which, if corrected, would have prevented the collision. Without essential factual findings on CRYSTAL's reduced situational awareness, however, and the actions its crew took (or failed to take) to avoid collision risk, a probable cause assessment would be incomplete, and would not convey all lessons learned from this mishap.

8. We appreciate your continued collaboration ensuring appropriate safeguards for controlled Personally Identifiable, Private Health, National Defense, and International Traffic in Arms Regulations information. We value NTSB's balance between your investigative duties, public safety end-states, and awareness of the national security risk of aggregating unclassified technical details about our warships. Thank you again for the opportunity to comment on reference (a) in support of NTSB and Navy's shared objectives to ensure this type of tragedy never happens again.

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[1] MARINA found on page 16 of their report that "MV ACX CRYSTAL created a risk of collision by not taking appropriate action to avoid collision, even if she was the Stand-on vessel." After listing several pages of deficiencies, the investigators concluded on page 19, probable cause for "the collision between MV ACX CRYSTAL and USS FITZGERALD was the failure to assess the risk of collision by both vessels, inadequate bridge resource management and lack of communications between the two (2) OOWs."

[2] JTSB found on page 27 of their report that at approximately 01:27:35 CRYSTAL's OOW could probably tell from FTZ's constant bearing and decreasing range that there was a risk of collision. He flashed a daylight signaling lamp at FTZ, with no response. Despite taking this action, he did not sound any short blasts whatsoever, let alone the five such blasts required by the COLREGS. At approximately 01:29, about 90 seconds before the collision, the OOW,

flashed a second light down the line of bearing toward FTZ, but took no other action to alert FTZ to the impending collision. The JTSB concluded that the appropriate step under COLREGS Rule 34 was to warn another vessel is five short blasts, not just flashing a daylight signal. JTSB on page 7 of their report that CRYSTAL's OOW failed to take any action to avoid collision until 01:30:16, just 18 seconds before impact, when he ordered Hard Starboard and took CRYSTAL out of autopilot.

[3] COLREG 34 (d) states "When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by a light signal of at least five short and rapid flashes."

[4] Immediately before the collision, CRYSTAL was utilizing its autopilot in a moderately dense traffic area while transiting a vessel traffic separation scheme. The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) requires transfer from autopilot to manual steering with sufficient time to deal with a potentially dangerous situation. STCW further states "with a ship under automatic steering it is highly dangerous to allow a situation to develop to the point where the officer in charge of the navigational watch is without assistance and has to break the continuity of the look-out in order to take emergency action." See, STCW, 1978, Seafarers' Training, Certification and Watchkeeping Code, Chapter VIII, Standards Regarding Watchkeeping, ¶ 35 (July 24, 1995)