



5000

13 Sep 2017

Subj: [REDACTED] SIGNIFICANT EVENT/NEAR-MISS REPORT 2017-1

Ref: (a) COMNAVSURFLANTINST 3040.1C
(b) CNSPINST/CNSLINST 4700.3
(c) NAVSEAINST 9093.1C

1. Summary of Significant Event/Near-Miss. On 7 September 2017, during a simultaneous time-on-top dual missile live firing event in support of Combat Systems Ship Qualifications Trial (CSSQT), [REDACTED] launched a single SM-2 Blk IIIA at a BQM-74E target without a "Clear to Fire" call from the [REDACTED]. Ultimately, the watch team's lack of procedural compliance led to the weapon's release without proper permission. Several process and cultural breakdowns were identified as contributing factors. Specifically, the watch team was distracted by atypical calls from the range, uncharacteristic flight performance of the targets, and operational realism injects to the scenario that had not previously been briefed or trained to during practice sessions. Additionally, only the CO and Range Safety Officer (RSO) were listening to the Range Safety Net which significantly minimized the effectiveness of forceful backup from the remainder of the watch team. Corrective actions have been outlined below and completed.

2. Designation of Apparent Cause: Design___ Material___ Personnel X
Procedure X

3. Equipment Conditions:

- a. Condition II Air (Watch Team Gold) was set, Weapons Posture I Air Modified (AFT VLS and CIWS Only) was set, engineering plant was configured for full power, restricted maneuvering doctrine was in effect, material condition modified zebra was set.
- b. The combat system was configured in accordance with CSSQT testing plan.
- c. Go/No Go criteria was met by CSSQT team aboard and Firing Team prior to execution of live firing event.

4. Description of Significant Event/Near-Miss:

- a. [REDACTED] commissioned on [REDACTED] crew completed all pre-commissioning training requirements per reference (b) prior to sail-way from Pascagoula,

[REDACTED]

[REDACTED] and upon arrival in homeport. [REDACTED] is scheduled to begin basic phase training in summer 2018 upon completion of her post-shakedown availability (PSA).

b. Between June and September 2017, [REDACTED] Blue and Gold Watch Teams completed over 60 hours of air defense training in preparation to conduct live firing events during CSSQT. This training included nominal and off-nominal scenarios, lessons learned, and a USS [REDACTED] Failure Review Board discussion. The scenarios did not include operational injects from Commander, Operational Test and Evaluation Force (COTF). A range safety brief was provided by [REDACTED] to [REDACTED] senior leadership and principal firing team watch standers and CSSQT team leads.

c. On September 6, 2017, [REDACTED] successfully executed DT/OT-6, a CSSQT live firing event involving an SM-6 engagement against a ground launched target. During the first presentation of the target, the ship was not in the correct location because the onboard CSSQT personnel had incorrectly told the ship to be at the scenario initial point (IP) at target launch. During this presentation, the range called over the safety net and told the ship to maneuver. This would have required the ship to turn toward the target and would have masked CIWS. The CO called "Red Range" and reset the scenario. [REDACTED] reset her position, and the target was presented a second time for a successful execution of the scenario.

d. Timeline: 7 September 2017

(1) 0600 - [REDACTED] Gold Team begins communications checks with NAWCWD Range Safety.

(2) 1059 - Green Range for live firing event (LF02) granted from Range. Target B launched.

(3) 1100 - Air Defense SITREP reported over Net 15 by AAWC.

(4) Approx 1102 - CSC reports to TAO on Net 15 that Target B is outside of LF02 auto-SM doctrine parameters.

(5) Approx 1103 - CSSQT team calls Range to verify parameters.

(6) Approx 1104 - Range confirms that target B will meet parameters.

(7) Approx 1105-1112 - The Range moves TSP 1000 yards to the south of the original position due to a range fouler. The Range passes via the Safety Net that the ship is not in the proper position for TSP. The CO provides specific maneuvering directions to the Bridge to move the ship to the proper TSP location.

(8) 1113 - EWS reports indications of an inbound C-802 over Net 15.

[REDACTED]

(9) 1113 - Target B turns inbound within safe firing bearings, TAO orders hostile designation and CIWS AAW Auto, Hold Fire Off. TAO gives engagement order to AIR to kill Target B.

(10) 1115 - Target A is launched. RSO passes to Range Safety, "Standing by for Clear to Fire." Range passes "Target A failed" over Range Safety Net.

(11) 1116 - TAO calls new track Target A, TAO states on Net 15 "Target A in the dive".

(12) 1116 - TAO gives engagement order to kill Track A. TAO announces FIS is Green on Net 15. CO intervenes and TAO does not complete action. TAO announces FIS is Red directly after.

(13) 1116 - RSO announces "Target A Failure" over Net 15, and states "We do not have Clear to Fire" out loud (not via Net 15).

(14) 1116 - CO states "Clear to Fire" to TAO. TAO announces FIS is Green on Net 15 and rolls FIS Green.

(15) 1116 - MSS Fire Authorize SM-2 for Target B, reports missiles away.

(16) 1116 - RSO receives "Red Range" call over Range Safety Net.

5. Problems and Root Causes:

a. Process Breakdowns.

(1) [REDACTED] fired a standard missile before receiving "Clear to Fire" from the Range. All calls and orders were not made over Net 15. Although the watch team had practiced correct communications and procedural compliance with range calls during training, watch standers became distracted during the live firing event and failed to follow proper procedures.

(2) [REDACTED] did not execute "Hold Fire/Destruct" on "Red Range" call from the Range. Although the watch team had practiced "Hold Fire" procedures, they had not specifically trained to automatically perform "Hold Fire" procedures upon hearing "Red Range" from the Range.

(3) "Target A Failure" was stated over the Range Safety Net to the RSO which was not a standard range call briefed by the Range. The Range moved the TSP after target launch and directed the CO to maneuver the ship moments before the missile needed to be fired. Additionally, the Range did not provide clear guidance to the ship prior to the scenario regarding where the ship needed to be located at target IPs (e.g., different locations for each target utilized). Also, COTF representatives added intelligence injects and AW SITREPs to the scenario. These calls and directions from the Range and COTF representatives were atypical and not previously briefed or practiced during training, which added confusion to the scenario for the watch team.

Additionally, the directions to maneuver the ship provided to the CO from the Range caused a distraction that drew focus away from the tactical picture.

b. Cultural Breakdowns:

(1) Procedural Compliance:

(a) [REDACTED] failed to adhere to "Clear to Fire" procedures briefed by the Range. Barriers identified that contributed to the failure included: 1) Unclear calls/directions from the Range, 2) Misunderstood communications between CO/TAO/RSO, 3) Distractions caused by the Range changing the TSP and directing the ship to maneuver, and the targets performing differently than observed during training scenarios, and 4) Stress caused from the previous day's live firing event reset added pressure to the watch team to not incur mistakes in their execution, and the scenario timeline became abnormally compressed towards the launching time which caused watch standers to feel rushed in their decision making.

(b) [REDACTED] failed to obtain reference (c), *Combat System Ship Qualification Trials for Surface Ships*, prior to execution of CSSQT. As a result, the CO and crew were unaware of the responsibilities required of the ship and ISIC in preparation for conducting CSSQT events.

(2) **Questioning Attitude.** The watch team's and CSSQT team members' ability to have a questioning attitude was inhibited due to COTF restrictions permitting the Range Safety Net to only be heard by the RSO and CO so the event scenario would not be disclosed to the rest of the watch standers.

(3) **Forceful Backup.** The watch team and CSSQT team members were unable to provide forceful backup to the CO and RSO because they were not permitted to hear the Range Safety Net. The RSO failed to pass all communications over Net 15, so only the CO heard some of his updates and directions.

(4) **Formality.** Although the RSO was inquiring about the abnormal "Target A Failure" call, the Range delayed their response and eventually called "Red Range" after the missile had already been fired. Verbatim repeat backs were not always adhered to over the Range Safety Net from the RSO. When the Range changed the briefed plan by moving TSP, there should have been a discussion to consider resetting the scenario. This communication should have come over the range safety circuit and not via a phone call to the CSSQT personnel in CIC. The RSO should not have stated "We do not have clear to fire."

(5) Level of Knowledge.

(a) Although the watch team received over 60 hours of training prior to the firing event, key watch standers on the firing team including the RSO, TAO, AIR, and MSS had never fired a standard missile. Additionally, as a pre-commissioning crew, [REDACTED] has not completed a basic training phase and does not have an Air Warfare certified watch team.

[REDACTED]

Although the intelligence injects and SITREPs added realism to the scenario, the watch team was not trained to process tactical information during the live firing events.

(b) The watch team did not possess the tactical knowledge they felt was being expected of them during the scenario. Watch standers were trained that CSSQT live firing events are test shots to analyze equipment performance. However, the intelligence injects and AW SITREPs added on the actual firing date made the watch standers feel they were being evaluated on their tactical performance yet they have not had the tactical experience of a training cycle.

6. Corrective Actions:

a. [REDACTED] watch teams and CSSQT team members conducted an operational pause on 7 September 2017, which included a tabletop discussion focusing on the live firing event's lessons learned, range calls, range missile engagement policies, and range missile operating cadence procedures. An additional tabletop discussion covering the same topics was held with [REDACTED] watch teams, CSSQT team members, and the Range on 8 September 2017, which also reiterated proper procedures, coordination, and communication.

b. Both watch teams conducted nominal and off-nominal training scenarios with the Range on 8 September 2017, to practice communications and coordination.

c. "Hold Fire" training was held with the applicable watch stations on 8 September 2017, covering the correct actions that will be initiated upon receiving a "Red Range" call from the Range when weapons have been employed.

d. During future live firing events, all communications will be passed over Net 15. "Clear to Fire" will only be passed from the RSO when received from the Range. Otherwise, "Clear to Fire" will not be spoken by any [REDACTED] watch stander or CSSQT team member to eliminate possible confusion regarding range clearance. The TAO will only roll FIS green upon receiving "Batteries released" from the CO. The CO will not grant batteries released until verification of "Clear to Fire" from the RSO over Net 15 is heard. The Range Safety Net will be placed in the overhead speaker in CIC or another trusted agent will be wearing a headset, so multiple personnel are able to hear range calls and provide forceful backup to the watch team. Additionally, the watch team will confirm ship location requirements for each target prior to event commencement.

e. [REDACTED] will review reference (c) in its entirety and ensure all ship responsibilities are met. For future CSSQT ships, recommend the CSSQT team leads provide this reference and any additional documents generated by the testing community regarding developmental and operational tests to be performed to the command leadership to ensure the ship fully understands the objectives being executed during CSSQT.

[REDACTED]

f. For future testing events that involve COTF participation, [REDACTED] will liaison with the team lead to ensure operational testing and inject execution plans are fully discussed and agreed upon by the ship and ISIC. For future CSSQT ships, recommend this meeting occur early in the CSSQT planning phase to ensure the watch teams' warfare training incorporates the appropriate operational realism.

7. Commanding Officer's Comments: Bottom Line - this incident was preventable. The importance of this situation was not lost on the watch teams as we dissected the event during our multiple tabletop discussions and critique process. I recognize the need to reiterate the core principles of sound shipboard watchstanding principles and ensure these standards are adhered to by the entire crew. I alone am accountable for this failure; however, I applaud the watch teams for sharing responsibility in actively ensuring a safe and more compliant environment aboard [REDACTED]. Following a productive critique process and the completion/implementation of the corrective actions identified, I am confident we are taking strong and sound measures to prevent this incident from recurring.

[REDACTED]