



**DEPARTMENT OF THE NAVY**  
NAVAL SURFACE FORCE  
UNITED STATES PACIFIC FLEET  
2841 RENDOVA ROAD  
SAN DIEGO, CALIFORNIA 92155-5490

IN REPLY REFER TO  
5200  
Ser N00J/017  
26 Jan 23

FINAL ENDORSEMENT on (b) (5) USN, ltr of 12 Dec 22

From: Commander, Naval Surface Force, U.S. Pacific Fleet  
To: File

Subj: PRELIMINARY INQUIRY INTO THE NEAR-MISS COLLISION BETWEEN USS  
HARPERS FERRY (LSD 49) AND USS MOMSEN (DDG 92)

1. On 29 November 2022, USS HARPERS FERRY (LSD 49) (HFY) and USS MOMSEN (DDG 92) (MOM) were transiting in San Diego Bay when they came close to colliding. The near-miss was well documented by harbor cameras, installed navigation systems, and accounts by those involved. The vessels were able to maneuver past each other safely, and neither ship was damaged.
2. This near-miss collision between warships reminds us of the inherent risk present during operations at sea. We must reduce and mitigate those risks through a diligent and focused performance during special evolutions or transits in restricted waters. This preliminary inquiry is an opportunity to critically assess processes and implement lessons learned to ensure this type of incident does not occur again.
3. Except for those items noted below, I approve the findings of fact, opinions, and recommendations of the preliminary inquiry officer (PIO). I concur with the preliminary inquiries' conclusion that the near-miss collision was preventable and resulted from an accumulation of failures, including Bridge Resource Management (BRM) implementation, Bridge-to-Bridge (BTB) communications, Rules of the Road adherence, watch team execution, navigation planning, and risk management.
4. The following corrections, modifications, and annotations are made to the PIO's opinions:
  - a. Modify opinion 4 to include the following: HFY's Navigation Brief contained MOM's movements to Naval Air Station North Island (NASNI). This information and the visual observation of another warship already berthed at the fuel farm, should have informed HFY's bridge team that MOM was not proceeding to the fuel farm.
  - b. Modify opinion 10 to include the following: The investigation could not ascertain whether or not the HFY Master Helmsman or Helm Safety Officer ever announced "Orders to the Helm" to signify their confusion as to who had the Conn.
  - c. Modify opinion 22 to include the following: Had HFY been on the outbound side of the channel, passage would have been more manageable; however, the overarching guidance that vessels should not meet in a turn remains relevant.

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d. Modify opinion 33 to remove FF 33. FF 33 pertains to MOM's Voyage Management System (VMS) rate of turn and movement in the channel.

e. Modify opinion 40 to include: HFY watch standers should have correlated the SECURITE call to the briefed harbor movements.

f. Modify opinion 51 sentence to say: "Seeing MOM's STBD bow convinced HFY CO that PTP passage was not possible."

g. Non-concur with opinion 53. Since the whistle signals were separated by a period of time, it is doubtful they would have sounded like five short, and MOM should have responded with either two short to signal agreement or five short to indicate doubt.

h. Modify opinion 57 to include the following: Situational awareness of the pilots in their tractors is not as significant as the CO in the pilothouse, and the CO is ultimately responsible for determining an appropriate meeting situation. However, the expert knowledge of the harbor, provided by the pilot, should be taken into account during the CO's determination, particularly for a non-homeported ship such as MOM.

i. Modify opinion 60 to remove FF 150. FF 150 pertains to HYDROPACs, which would not have contained HFY's movements.

5. The following corrections, modifications, and annotations are made to the PIO's recommendations:

a. Modify recommendation 1.a to include the following: TYCOM should review and modify the NAVDORM verbiage pertaining to CICWO duties as necessary. TYCOM will not direct ships on how to tailor communication (COMMS) plans or which station has the guard on specific circuits. The COMMS plan should be briefed.

b. Modify recommendation 1.b to state the following: Formalize the TACOM watch via TYCOM guidance and develop a formal PQS or JQR. Non-concur with 1.b.i. TYCOM will clarify TACOM duties.

c. Modify recommendation 1.b.iii to refer to Tactical Communications Personnel Qualification (TACOM PQS) or Job Qualification Requirement (JQR) vice BMO.

d. Modify recommendation 2.a to remove the following: "COs should direct OODs to provide an audible SITREP to the bridge team anytime a deviation of 50 yards or more will occur during an approved S&A Voyage Plan. SITREPs should be relayed to CIC via best available means." Include the following: TYCOM should review the requirement to announce VMS alarms in the pilothouse.

e. Non-Concur with recommendation 3. Portions of this recommendation are included in paragraph 7 of this endorsement.

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f. Modify recommendation 4.a. to state: TACOM responsibilities should be formalized using TYCOM guidance, specifically the NAVDORM.

g. Modify recommendation 4.e to state: TYCOM should review verbiage in NAVDORM watch stander responsibilities to ensure optimum COMMS flow between bridge and CIC, including the 'safe for navigation reports.'

h. Non-concur with recommendation 5.b. TYCOM will review and modify NAVDORM APP-C to ensure external circuits are established and verified.

i. Non-concur with recommendation 5.i. The loss of IP Services impacts SIPR Chat and SATCOMM circuits and has minimal impact on an S&A Transit, which should rely primarily on LOS COMMS. BTB, Navy Red, and FLT TAC are all LOS voice circuits and should be used before SIPR Chat.

j. Modify recommendation 5.l to include the following: Log discrepancies should be briefed quarterly at the shipboard Navigation Council vice Navigation Brief.

k. Modify recommendation 7 to include the following: TYCOM should coordinate with FCAs to verify each FCA has a standard Harbor Overview brief. Navigation Councils would provide a venue for Port Ops/Harbor Pilots to brief their respective waterfront. Also, recommend Port Ops/Harbor Pilots make the Harbor Overview brief available for download.

6. I direct and add the following matters:

a. No later than 10 February 2023, the COs and XOs of HFY and MOM identified in this PI will personally report to me and provide a self-assessment of the incident and what actions will be taken on the next special evolution to improve their respective performances and those of their crews.

b. CNSP N7 will provide oversight to HFY and MOM to ensure the CO is properly training the crew on their roles and responsibilities during sea and anchor detail.

c. HFY and MOM will formalize respective Tactical Communicators watch as described in recommendation 1.

d. MOM will formalize procedures for BTB communications in the CO's Standing Orders.

e. SURFOR units will clarify their Standing Orders in accordance with recommendation 4, as modified above.

f. SURFOR unit Navigation Briefs will address topics described in recommendation 5, as modified above.

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g. All SURFOR Bridge Teams will review and receive a formal brief regarding areas of elevated risk in restricted waters. The brief will occur semi-annually in accordance with summer nav councils and will be included during BRM and Special Evolution Training (SET) sessions.

h. The HFY and MOM will practice evaluating target angles and bearing drift while in a turn during BRM and SET sessions.

i. TYCOM will review required attendees for BRM to determine if additional CIC watch standers are required.

j. TYCOM will formalize TACOM responsibilities in the NAVDORM.

k. TYCOM will review the NAVDORM and add necessary navigation equipment to be included as part of the Navigation Brief.

l. TYCOM will review the NAVDORM and make necessary modifications to Navigation Brief requirements for emergencies while transiting in restricted waters.

m. TYCOM will coordinate with FCA Port Ops to include recommended pilot boarding locations in the Harbor Movements message.

n. TYCOM will review the NAVDORM to verify harbor movements and likely meeting locations are included in the Navigation Brief.

7. No further action on this preliminary inquiry is necessary. This matter will be retained at Commander, Naval Surface Force, U.S. Pacific Fleet.

8. My point of contact on this matter is (b) (5) JAGC, USN, Force Judge Advocate, at (b) (5) or e-mail (b) (5)

(b) (5)

R. I. KITCHENER

Copy to:

COMCARSTRKGRU THREE  
COMEXSTKGRU THREE  
COMDESRON THREE ONE  
COMPHIBRON FIVE  
USS HARPERS FERRY  
USS MOMSEN

(b) (6), (b) (5)

12 Dec 22

**From:** (b) (6), (b) (7)(C) USN, Investigating Officer  
**To:** VADM Roy Kitchener, Commander, Naval Surface Force, U.S. Pacific Fleet

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**Ref:** (a) JAGMAN  
(b) COMNAVSURFPACINST 3530.4G (NAVDORM)  
(c) COMNAVSURFPACINST 3502.7B (SFTRM)  
(d) COMNAVSURFPACINST 3505.1C (Navigation, Seamanship, and Ship-Handling)  
(e) Department of Homeland Security Navigation Rules (COLREGS)

**Encl:** (1) Appointing Order dtd 30 Nov 22  
(2) Investigating Officer generated Timeline of Events  
(3) Interviews aboard USS HARPERS FERRY of 30 Nov 22 – 2 Dec 22  
(4) Interviews aboard USS MOMSEN of 2 Dec 22 – 3 Dec 22  
(5) Interview with San Diego Pilot of 5 Dec 22  
(6) MOMSEN – Deck Log  
(7) HARPERS FERRY – Deck Log  
(8) MOMSEN – VMS screenshots  
(9) HARPERS FERRY – VMS screenshots  
(10) MOMSEN – 29 Nov 22 Watchbill  
(11) HARPERS FERRY – 29 Nov 22 Watchbill  
(12) MOMSEN – Bridge-to-Bridge Transcript log  
(13) MOMSEN – RD 674 Transcript log  
(14) MOMSEN – SITREP of 29 Nov 22  
(15) HARPERS FERRY – SITREP of 29 Nov 22  
(16) YouTube video – “Warship Chicken” of 30 Nov 22  
(17) HARPERS FERRY – EOT log of 29 Nov 22  
(18) HARPERSFERRYINST 3121.1A – HFY CO’s Standing Orders  
(19) HARPERSFERRYINST 3530.4O – HFY NAVBILL  
(20) MOMSENINST 3121.1V – MOM CO’s Standing Orders  
(21) MOMSENINST 3530.4 – MOM NAVBILL  
(22) Twitter post by @SanDiegoWebCam of 29 Nov 22  
(23) MOMSEN TACOM JQR  
(24) MOB-N RE Trackers  
(25) SURFPAC NAVFUNDS report of 27 Nov 22  
(26) MEMORANDUM – Email with SURFPAC N7 regarding navigation requirements  
(27) MOMSEN – Navigation Brief of 28 Nov 22  
(28) HARPERS FERRY – Navigation Brief of 28 Nov 22  
(29) HARPERS FERRY – RADM Watchstander Quals  
(30) MOMSEN RADM – Watchstander Quals

### Preliminary Statement

1. Per reference (a), I conducted a Preliminary Inquiry into the facts and circumstances surrounding the near miss collision between USS MOMSEN (DDG 92) and USS HARPERS FERRY (LSD 49) in the San Diego narrow channel on 29 November 2022. Access to witnesses and evidence were complicated by movements on and off the USS MOMSEN and the USS HARPERS FERRY and communication with those vessels currently underway, but the requirements of enclosure (1) have been met (b) (6), (b) (7)(C) (b) (6), (b) (7)(C) JAGC, Region Legal Service Office Southwest provided advice and assistance.

2. In summary, the investigation concludes that the near miss was a result of: 1) failure by MOMSEN to adhere to procedures maintaining a proper watch on bridge-to-bridge as it pertained to the Tactical Communicator Position, 2) failure by MOMSEN to maintain a proper watch on bridge-to-bridge. 3) failure by HARPERS FERRY and MOMSEN to communicate via secondary communication channels, 4) failure by HARPERS FERRY to adhere to proper Bridge Resource Management (b) (5)

(b) (5) and 7) failure by HARPERS FERRY and MOMSEN Combat Information Centers (CIC) to provide forceful backup to the pilothouse.

3. Three major events prevented this near miss from being a collision: 1) the decisive actions taken by the MOMSEN Commanding Officer (CO) to maneuver to port, 2) the Officer of the Deck (OOD) onboard HARPERS FERRY assuming CONN (Conning Officer) and maneuvering to port when he felt the point of extremis was reached, and 3) the decision by both the MOMSEN CO and HARPERS FERRY OOD to shift rudders at approximately the same time to complete a successful maneuver to safe waters.

4. For brevity and clarity an consolidate timeline of major events is provided in the findings of facts. A full timeline of events and occurrences onboard both vessels is provided in Enclosure (2) for your review.

5. In the course of my investigation, I interviewed thirty-three individuals from the USS HARPERS FERRY and the USS MOMSEN, in addition to one civilian pilot. All individuals were advised of the voluntary nature of the interview and agreed to provide answers to questions without any incidents of note. Transcripts of all interviews are found in enclosures (3) through (5).

6. In the course of this investigation, I reviewed and collected all reasonably available evidence through administrative means. I additionally looked to references (b) through (e) to weigh actions against procedural compliance. The original deadline for this report was 5 Dec 2022, but an extension was requested and granted until 13 Dec 2022.

7. Additional supporting materials were reviewed but deemed not to be significant to the PI report, and are provided to you in separate correspondence for further review as necessary.

8. For ease in presentation of the findings of facts, the following are noted: 1) all ZULU times have been converted to local PST; 2) the USS MOMSEN RD 674 logs were in ZULU with an additional 9 minute error. This was verified by conducting a time check with GPS between the RD 674 control unit to determine how many minutes and seconds needed to be corrected for. All times associated with the RD 674 have also been corrected to local PST times; 3) the video posted to Twitter and YouTube capturing the near miss of 29 November 2022 had a 4 second offset when verified against gathered documentation. All times referenced to the video have been corrected accordingly; 4) unless specifically cited below, all courses are in course over ground (COG) and all speeds are in speed over ground (SOG). In certain circumstances, such as when discussing target angle, heading is specifically cited.

Findings of Fact

**CONSOLIDATED MAJOR EVENTS OF 29 NOVEMBER 2022**

1. At 0830, USS MOMSEN (MOM) was underway and set sea and anchor (S&A) detail for entry into San Diego harbor. [Encl (6)]
2. At 0911, USS HARPERS FERRY (HFY) got underway from Naval Base San Diego (NBSD) having previously set S&A detail, came to maximum engineering reliability throughout the ship, and set the restricted maneuvering doctrine. The Pilot disembarked shortly after departure from NBSD. [Encl (7)]
3. Set and Drift is logged throughout both MOM and HFY's transits but was negligible throughout the evolutions. [Encls (6), (7), (8), (9)]
4. The watch team for both vessels was as follows for their respective S&A details: [Encls (10), (11)]

WATCHSTATION	USS HARPERS FERRY	USS MOMSEN
CO	CDR Eric Winn	CDR Eric Roberts
XO	(b) (6), (b) (7)(C)	
CMC		
OOD		
OOD U/I		
JOOD		
CONN		
NAV		
ANAV		
TACOM		
TACOM U/I		
CICWO		
TAO		
HELM SAFETY		
PILOTING		
MASTER HELM		
LEE HELM		
SHIPPING OFFICER		
<i>Civilian Pilot</i>		

5. Between 0830 and 1015, MOM made various communications with both San Diego tractor for pilot pickup and degaussing on bridge-to-bridge (BTB) VHF Channels (CH) 12 and 13. [Encls (6), (12), (13)]
6. MOM came to Full Power with all GTEs online. [Redacted] (b) (5) [Redacted] MOM made various course and speed changes in support of their approach to San Diego Harbor before steading up at 0951 on Course 353, speed 10 knots, inbound to San Diego. [Encls (6), (12), (13)]
7. Between 0911 and 1009, HFY made various course and speed changes in support of their departure from San Diego. [Encl (7)]
8. HFY maneuvered outside the [Redacted] (b) (5) [Redacted] the Naval Station North Island (NASNI) carrier piers to provide more sea room to USS TRIPOLI who was inbound to NBSD. This navigation deviation was not fully understood by all watchstanders. [Encl (3)]

9. MOM prepared to render honors to HFY due to embarked CPR-5. MOM XO led the preparation efforts but spent most time observing watchstanders and clearing bridgewings for turns. MOM CO had no concerns with the level of support MOM XO provided. [Encls (4-1), (4-2)]
10. At 1009 HFY came left to course 225 and rendered honors with USS TRIPOLI. [Encls (3), (7), (9)]
11. After HFY rendered honors with USS TRIOPOLI, HFY XO spent most of the remaining transit observing watchstanders and clearing bridgewings. While he remembered many of the actions discussed related to the events that morning, he did not recount many interactions with the HFY CO. [Encl (3)]
12. At 1012, HFY arranged a port-to-port (PTP) passage with MOM over (b) (5), (b) (1) (A) [Encls (12), (13), (14), (15)]
13. At 1015:05, MOM established communications with San Diego Tractor 7 of (b) (5), (b) (1) (A) to arrange receipt of a tug and pilot alongside MOM's starboard (STBD) bow at 5 knots (kts). [Encls (5), (12), (13)]
14. No further communications on (b) (5), (b) (1) (A) are recorded until approximately 1019:53, a period of over 5 minutes. [Encl (13)]
15. Just prior to 1015:05, MOM TACOM manually shifted from (b) (5), (b) (1) (A) [Encls (4-4), (4-9), (4-10)]
16. MOM watchstanders believe they shifted back to (b) (5), (b) (1) (A) following the communication with Tractor 7 at 1015:05, but this is unverifiable. [Encls (4-4), (4-9), (4-10)]
17. MOM handheld BTB radios were not dialed to (b) (5), (b) (1) (A) [Encls (4-4), (4-9), (4-10)]
18. At 1016:28, MOM is on course (b) (5), (b) (1) (A) [Encl (8)]
19. At 1016:29, HFY is on course (b) (5), (b) (1) (A) and speed over ground (b) (5), (b) (1) (A) HFY executed their turn to (b) (5), (b) (1) (A) shortly after. [Encl (9)]
20. By HFY VMS, TRACTOR 7 is approaching the STBD bow of MOM for pilot embarkation onboard. [Encl (9)]
21. While on the (b) (5), (b) (1) (A) HFY CO approached NAV at the chart table and informed her of his desire to remain on the right side of the channel to give plenty of sea room to MOM. HFY NAV was previously unaware of the PTP passing arrangement. [Encls (3-1), (3-8)]
22. At approximately 1016:38, USS GRIDLEY made a (b) (5), (b) (1) (A) informing all San Diego traffic that they are eastbound in the inbound TSS to NASNI. HFY was approximately 24s from their planned wheel over point from course (b) (5), (b) (1) (A) Of note, San Diego does not have a TSS. [Encls (9), (16)]
23. At 1017:00, HFY slows and orders all engines ahead 1/3 for 5 knots and the HFY CONN orders left standard rudder to course (b) (5), (b) (1) (A) The turn will last until just after 1019. [Encls (7), (17)]
24. Based on relative reciprocal voyage plans and timing, HFY and MOM are projected to meet in the most dangerous portion of the San Diego harbor narrow channel, an area San Diego pilots call the Triangle (red buoys (RB) 16, 16A, and green buoy (GB) 17) where pilots attempt to avoid meeting situations. [Encl (5)]

25. At 1017:58, MOM is on course (b) (5), (b) (1) (A) at a speed of (b) (5), (b) (1) (A) and is (b) (5), (b) (1) (A) right of track. Distance to turn (b) (5), (b) (1) (A) Tractor 7's AIS symbology is alongside MOM. [Encl (8)]

26. At 1017:59, HFY is turning to port, passing course (b) (5), (b) (1) (A) with RB 16A on their port side. [Encl (9)]

27. At 1018, the San Diego Pilot has embarked MOM. [Encls (5), (6)]

28. At 1018, HFY bridge becomes confused of MOM intentions based on the following: observation of tugs in the vicinity of MOM, confusion USS GRIDLEY (b) (5), (b) (1) (A) from MOM for transit to NASNI pier, location of the Naval Fuel Farm, lack of awareness that MOM is taking a pilot, and MOM heading to port with no observed STBD movement. [Encls (3-4), (5), (9), (13)]

29. HFY confusion leads HFY to initiate a (b) (5), (b) (1) (A) (b) (5), (b) (1) (A) (b) (5), (b) (1) (A) Subsequently HFY OOD and OOD U/I retry (b) (5), (b) (1) (A) (b) (5), (b) (1) (A) [Encls (3-1), (3-4), (3-8), (3-11)]

30. HFY Standing Order #6 (PARA 4), states that the CICWO's responsibilities for navigation are to provide the OOD with the best possible navigation support, using all of CIC's capabilities, regardless of whether OOD asks for help. [Encl (18)]

31. At 1018, during the turn (b) (5), (b) (1) (A) HFY NAV asked for verification from HFY CO regarding his desire to be right upon completion of the turn (b) (5), (b) (1) (A) and maneuver to STBD side of the channel. HFY CO stated he wanted to see what MOM was going to do first. [(3-1), (3-8)]

32. At 1018:28, MOM had cast off the tug to maneuver to STBD, and is (b) (5), (b) (1) (A) of track. [Encl (8)]

33. MOM continued to move towards the center of the channel during the turn before ending up (b) (5), (b) (1) (A) (b) (5), (b) (1) (A) VMS depicted a turn to STBD at a rate of turn of (b) (5), (b) (1) (A) near RB 14, (b) (5), (b) (1) (A) off the STBD bow. [Encls (4), (5), (8)]

34. At 1018:29, HFY was continuing their port turn past course (b) (5), (b) (1) (A) with RB 16A off the port quarter. MOM AIS shows them just south of RB 14 and GB 15. [Encl (9)]

35. At 1019:03, HFY CO directed the HFY CONN to order all back 1/3 and right full rudder. [Encls (3-1), (3-4), (3-8), (3-9), (17)]

36. HFY CO believed in hindsight the right full rudder was not the correct order to make. [Encl (3-1)]

37. At 1019:13, MOM's rate of turn is now (b) (5), (b) (1) (A) and the ship's heading has continued right to (b) (5), (b) (1) (A) but has only moved approx (b) (5), (b) (1) (A) in the last 30 seconds. The ship is now (b) (5), (b) (1) (A) of track and the SPS-73 plots HFY (b) (5), (b) (1) (A) [Encl (8)]

38. At 1019:14, HFY is continuing to port past course (b) (5), (b) (1) (A) with a distance of (b) (5), (b) (1) (A) to MOM. MOM AIS track indicates the ship is north of RB 14 and GB 15 and continuing to close the middle of the channel. [Encls (7), (9)]

39. HFY OOD and NAV express disagreement throughout the next several rudder and speed changes in which the CO changed his mind, came to ALL STOP, then ordered back 1/3 again. HFY CONN receives orders from HFY CO, OOD, and NAV. HFY CONN becomes confused who to take orders from. [Encls (3-1), (3-4), (3-7), (3-8), (3-9)]

40. Interviews show at this time there was disagreement and confusion on the HFY bridge. [Encls (3-1), (3-4), (3-7), (3-8), (3-9)]
41. Interview showed HFY CO gave orders to increase decision space. [Encls (3-1), (3-4), (3-7), (3-8), (3-9)]
42. HFY Standing Orders do not specifically address communications from NAV to the CONN. [Encl (18)]
43. HFY CO stated he knew COLREGS Rule 34 to sound five short blasts applied, but did not believe there was enough time to sound it. [Encl (3-1)]
44. HFY CO became more convinced that MOM is heading to the Naval Fuel Farm based on their target angle. [Encl (3-1)]
45. HFY CO, OOD, and NAV see a target angle on MOM that indicates they are not maneuvering for a PTP passage. HFY CO (b) (5), (b) (1) (A) [Encl (3-1)]
46. HFY was limited in a maneuvering to port due to the proximity to RB 16 on the port beam. [Encls (3-1), (3-4), (3-8)]
47. HFY Navigation Bill (PARA 4) states that the navigational draft, measured to the deepest projection beneath the keel (b) (5), (b) (1) (A) [Encl (19)]
48. The MOM bridge was unaware of the concern on the bridge of HFY, and continued their transit plan. TRACTOR 7 is alongside and the pilot is embarking. The CO moved to the STBD bridgework to observe the pilots embarkation. [Encls (4-1), (4-4), (4-8), (5)]
49. After pilot came aboard, MOM executed their STBD turn. MOM CO immediately noticed that HFY's bearing drift was not to the left as expected. This is the first moment he suspects something in the arranged meeting had changed. (b) (5), (b) (1) (A) [Encl (4-1)]
50. Per MOM Standing Order #3 (PARA 8), MOM's draft is (b) (5), (b) (1) (A) and Navigation draft is (b) (5), (b) (1) (A) [Encl (20)]
51. Per MOM Navigation Bill (PARA 5), the Safety Depth shall be set (b) (5), (b) (1) (A) based at approximately (b) (5), (b) (1) (A) of MOM's navigational draft, which is (b) (5), (b) (1) (A) [Encl (21)]
52. MOM CO discusses the position of HFY in the channel with his bridge team and believes them to be in the middle of the channel and continuing left. MOM CO doubted HFY maneuvering intentions. MOM NAV recommended to the MOM CO to sound five short blasts. [Encls (4-1), (4-8)]
53. When maneuvering intentions are in doubt, Rule 34 applies and 5 short blasts is appropriate. Rule 34 also allows for BTB coordination. [Ref (e)]
54. MOM CO declined to sound 5 short blasts because he thought it would add to the confusion of the situation, especially given the decreasing range between the two ships and maneuverings that might occur after sounding it. MOM CO was afraid HFY would come right at precisely the time he would come left. [Encl (4-1)]
55. MOM OOD directed the TACOM to contact HFY on (b) (5), (b) (1) (A). It is about this time that the MOM CO attempts to clarify previously agreed to PTP passage on (b) (5), (b) (1) (A) [Encls (3-1), (4-1), (5)]

56. At 1019:58, MOM has almost completed its turn and is continuing STBD pas (b) (5), (b) (1) (A) (b) (5), (b) (1) (A). However, it is now (b) (5), (b) (1) (A) of track and HFY, via the SPS-73 on VMS, is at a range of approx. (b) (5), (b) (1) (A) [Encl (8)]

57. At 1019:59, HFY's course over ground is (b) (5), (b) (1) (A) speed over ground, and AIS shows MOM at a distance of (b) (5), (b) (1) (A) MOM AIS feed shows course is approx (b) (5), (b) (1) (A) [Encl (9)]

58. At 1020:15, HFY attempts to state maneuvering intentions to MOM on (b) (5), (b) (1) (A) but stops before completing the communication. [Encl (12)]

59. MOM CO states over BTB that he is coming to port, and directs the MOM CONN to order a hard left rudder. [Encls (4-1), (13)]

60. When asked if he agreed with the MOM CO's decision not to sound 5 short blasts, PILOT concurred that it likely would have confused the situation more, though he acknowledged that Rule 34 directed it. He also stated he agreed with the CO's decision to come to port. [Encl (5)]

61. HFY JOOD stated the HFY OOD, NAV, and the CO were giving various orders and the CONN did not seem to respond well to all the various directions. The HFY JOOD believed the CONN was trying to figure out whose order to follow. [Encls (3-6), (3-7)]

62. HFY HELM SAFETY stated that due to the confusion between the HFY CO, OOD, NAV, and CONN, that she instructed the HELM SAFETY and LEE HELM (b) (5), (b) (1) (A) [Encl (3-13)]

63. HFY Standing Order #3 (PARA 1 and 2), states that OODs shall ensure no one speaks with the Helmsman except the CONN or other person with authority to issue orders to the Helmsman (CO, XO, OOD) and that the Helmsman diligently performs his/her duties without distraction. [Encl (18)]

64. HFY Standing Order #3 (PARA 5) states that the communication between the CONN and the Helmsman (and Lee Helm when assigned) is the most important conversation on the Bridge. All other conversations should cease when the CONN and Helm are communicating. [Encl (18)]

65. MOM XO moved to the disengaged side of the ship to observe any potential hazards on that side. [Encl (4-2)]

66. At 1020:28, MOM's hard left rudder is taking effect and the rate of turn is (b) (5), (b) (1) (A) HFY's position via SPS-73 in VMS is (b) (5), (b) (1) (A) [Encl (8)]

67. At 1020:29 HFY is turning to STBD pas (b) (5), (b) (1) (A) over ground at speed (b) (5), (b) (1) (A) and a speed leader indicating HFY is turning to starboard, showing the effect of the hard right rudder. AIS shows the distance is (b) (5), (b) (1) (A) from MOM (b) (5), (b) (1) (A) [Encl (9)]

68. A late entry at 1020 shows that the HFY OOD took the CONN and maneuvered left full rudder and sounded two short blasts twice. When ordering left full rudder and sounding two short blasts, HFY OOD was unaware of the actions MOM was taking. He then moved to the bridge wing and answered MOM's BTB call stating his maneuvering intentions and continued to maneuver HFY clear of danger. [Encls (3-1), (3-4), (3-8), (7)]

69. HFY Standing Order #1 (PARA 4), states that all officers with the exception of the CO and XO (and NAV in some instances) are subordinate to the OOD and that they have authority to take immediate

action without waiting for the COs arrival on the Bridge, when necessary to ensure the safety of the ship or crew. [Encl (18)]

70. HFY Standing Order #3 (PARA 1 and 2), states that OODs shall maneuver the ship without consulting the CO to avoid collision or a hazard to navigation. [Encl (18)]

71. HFY Standing Order #3 (PARA 4), states that OODs shall know and follow the Rules of the Road. Rules of the Road will not prevent a collision; OODs will prevent a collision by using the Rules of the Road in concert with their good judgement. OODs are to use all means available, to include Bridge-to-Bridge radio, to clarify the maneuvering situations as necessary. [Encl (18)]

72. At 1020:42, HFY orders all engines ahead 1/3 and shortly thereafter to 2/3. [Encl (17)]

73. HFY CO agreed with the actions of the HFY OOD. [Encls (3-1), (3-4), (3-7)]

74. At 1029:58, MOM is maneuvering to port with a rate of turn of (b) (5), (b) (1) (A) [Encl (8)]

75. At 1020:59 HFY is turning to port past course (b) (5), (b) (1) (A) at speed (b) (5), (b) (1) (A) on the port quarter, distance to MOM is (b) (5), (b) (1) (A) [Encl (9)]

76. In HFY CIC, a Class C Fire starts and SPS-67 and SPS-73 radar feeds to CIC are lost. Class C Fire was a blown breaker in CIC and logged at 1024. Throughout the rest of the transit, CIC is not able to provide any navigation or contact management support. [Encls (3-4), (3-11), (3-12), (3-14)]

77. At 1021 MOM orders hard right rudder. [Encl (7)]

78. At 1021 HFY maneuvered hard right rudder to course (b) (5), (b) (1) (A) [Encl (7)]

79. Both vessels complete a safe passage. CPAs in VMS were (b) (5), (b) (1) (A) while estimated by both bridge teams are much closer and MOM CO believed it was closer to (b) (5), (b) (1) (A) by seaman's eye. [Encls (3-1), (4-1), (8), (9)]

80. At 1426 four photos of the near collision are posted on twitter account @warshipcam showing the encounter in the channel. [Encl (22)]

81. Later on 30 Nov 22, a 30 minute video was posted on YouTube showing the encounter with associated VHF audio. [Encl (16)]

## **COMMUNICATION**

### **Bridge-to-Bridge (BTB) Procedures**

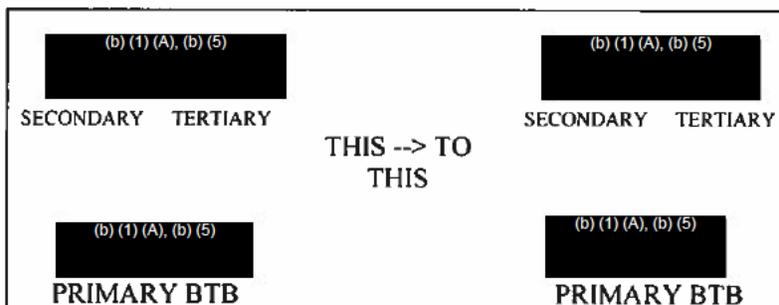
82. MOM monitors three Channels on BTB. The primary is available for monitoring and transmitting. (b) (1) (A), (b) (5) [Encls (4-4), (4-5), (4-6), (4-9)]

83. To transmit on a channel that is not currently set to primary, the speaker must manually change the channel. [Encls (4-4), (4-5), (4-6), (4-9)]

84. The secondary and tertiary speaker channels can be switched (b) (1) (A), (b) (5) while the volume can be adjusted with knobs for each speaker. [Encls (4-4), (4-5), (4-6), (4-9)]

85. MOM stations a Tactical Communicator (TACOM) at the BTB radio. Under Instructions (U/I) are often used as well. [Encls (4-1), (4-4), (4-5), (4-6), (4-9)]

86. It is the MOM TACOM Standard Operating Procedure (SOP) when shifting the primary BTB handheld from (b) (1) (A), (b) (5) and vice-versa. [Encls (4-4), (4-5), (4-6), (4-9)]



87. MOM BTB records all inbound and outbound communications that take place on the channel that is dialed in to the primary position on the BTB via the RD 674 system. [Encls (6), (7)]

88. A MOM CIC speaker monitoring BTB is set to mirror whatever is dialed into the primary handset in the pilothouse. [Encl (4-11)]

89. MOM configures BTB by setting the Primary as (b) (1) (A), (b) (5). Each channel can be interchanged between Primary, Secondary, and Tertiary. [Encls (4-9), (4-10), (4-11)]

90. MOM SOP is for the TACOM to switch BTB Primary (b) (1) (A), (b) (5) when crossing the Line of Demarcation. [Encls (4-4), (4-9), (4-10)]

91. MOM Standing Orders and Navigation Bill do not provide any guidance or direction on TACOM Watchstander Duties. [Encls (20), (21)]

92. Per MOM Navigation Bill (Enclosures 2 and 11), the bridge team is directed to ensure BTB Handheld Radios are Charged and On Station 1 hour prior to navigation detail and to test VHF bridge to bridge radios, hand-held VHF radios within 2 Hours of Entering Port and to check-in with local VTS/Traffic Control over VHF. Further they are required to check-in with local Tug/Pilot Association over VHF to confirm times within 1 hour and 15 minutes of Entering Port. [Encl (21)]

93. TACOM Watch and set up of Primary BTB Radio, and secondary, and tertiary speakers is not addressed in either MOM Standing Orders or NAV Bill. [Encls (20), (21)]

94. The MOM Tactical Communicator (TACOM) JQR is silent on how to demonstrate proficiency in changing channels between the primary, secondary, and tertiary BTB. [Encl (23)]

95. HFY does not address TACOM responsibilities in any shipboard instruction. [Encl (3-2)]

96. Per HFY Navigation Bill, testing of BTB Handheld Radios and bridge VHF BTB radios is an item to be performed prior to underway. [Encl (19)]

#### MOMSEN Use of Bridge-to-Bridge (BTB)

97. On 28 Nov, MOM had configured BTB for (b) (1) (A), (b) (5) in the primary pilothouse BTB handset and (b) (1) (A), (b) (5) above and to the right of the primary BTB handset while (b) (1) (A), (b) (5) just to the right of the secondary speaker. This is SOP onboard MOM. [(4-4), (4-9), (4-10)]

98. On 29 Nov, MOM verified tug and pilot for a pickup time of 0900 (b) (1) (A), (b) (5) [Encl (12)]

99. At 0942, MOM re-confirmed pilot pickup between (b) (1) (A), (b) (5) [Encl (12)]

100. At 1006, MOM crossed the Line of Demarcation. [Encl (6)]

101. MOM TACOM states he shifted Primary BTB (b) (1) (A), (b) (5) remaining in Tertiary. [Encl (4-9)]

102. At 1010:06, MOM established comms with Degaussing Range and passed appropriate information (b) (5), (b) (1) (A). Length of that exchange is 1m and 08s. [Encl (13)]

103. At 1012:21, HFY TACOM contacts MOM TACOM on BTB (b) (1) (A), (b) (5) to arrange for a PTP passage which MOM bridge team concurred with. Along with passage concurrence, MOM informed HFY that it was inbound to NASNI. The length of that communication is 39s. [Encls (3-1), (3-4), (4-9), (12), (14), (13), (17)]

104. At 1013:12, MOM contacted Degaussing Control of (b) (1) (A), (b) (5) to complete Degaussing run. The length of that communication was 10s. [Encl (13)]

105. At 1014:16, MOM attempted to contact TRACTOR 7 on (b) (1) (A), (b) (5) and was initially unsuccessful. Length of that transmission is 30s. [Encl (13)]

106. MOM TACOM and TACOM U/I did not verify that they changed the tertiary channel IAW MOM SOP, but believe they followed MOM SOP. [Encls (4-9), (4-10)]

107. MOM OOD stated that while he had stood TACOM in past watches, he has made errors and neglected to follow MOM SOP as it pertains to adjusting secondary and tertiary BTB channels. When asked if it was possible the TACOM left (b) (1) (A), (b) (5) dialed into both Primary and Tertiary BTB speakers, he stated it was possible. [Encl (4-4)]

108. MOM handheld BTB radios were dialed to (b) (1) (A), (b) (5) [(4-4), JOOD, TACOM]

109. At 1015:05, MOM establishes communications with Tractor 7 on (b) (1) (A), (b) (5) to arrange receipt of the tug and pilot alongside MOM's STBD bow and to transit at a speed of between 5 to 7 knots. That period of communication is 25s. [Encls (5), (13), (12)]

110. Between 1015:30 and 1019:19 no exchange of communication data is logged by MOM RD 674 a period of about four minutes. [Encl (13)]

111. Just prior to 1015:05, MOM TACOM shifted from (b) (1) (A), (b) (5) BTB. While bridge watchstanders believe they shift back to (b) (1) (A), (b) (5) nothing was found to support that definitively. [Encls (4-4), (4-9), (4-10), (13)]

#### Communication between MOMSEN and HARPERS FERRY

112. At 1017, HFY OOD directed TACOM to initiate a second BTB call to MOM. No response received. [Encl (3-4)]

113. At 1018:19, HFY OOD U/I attempted bridge to bridge contact with MOM (b) (5) (b) (5) HFY OOD attempted BTB via handheld on the bridgewing, without response. [Encls (3-1), (3-4), (3-5)]

114. After unsuccessful BTB communications by HFY to MOM, HFY OOD directs CIC to establish comms with MOM on Navy Red and SIPR chat. [Encls (3-4), (3-9)]

115. In interview HFY CIC stated that only one attempt was made over Navy Red and MOM was not up in Chat. [Encl (3-11)]

116. At approximately 1018:31, HFY can be heard on video attempting to contact MOM on BTE (b) (1) (A), (b) (5) to (b) (5) Length of that transmission is 5s and was completed at approx. 1018:36. [Encl (16)]

117. At 1019:53, MOM CO attempted to contact HFY to confirm PTP passage as had been previously arranged on (b) (5), (b) (1) (A) The length of that attempted contact was 6s. [Encl (12)]

118. At 1020:15, HFY attempted to state maneuvering intentions to MOM or (b) (1) (A), (b) (5) but stops before completing the communication. Immediately following MOM CO stated their intention to maneuver to port to avoid HFY. Length of that communication was 11s. [Encl (13)]

119. HFY receives a BTB radio call from MOM, declaring MOM intention to maneuver to port and make a STBD to STBD passage. [Encls (3-8), (3-10)]

120. During this time 4m and 39s elapsed between successful communications between HFY and MOM. [Encl (13)]

#### Alternate Communication Challenges

121. At 0816, MOM suffered a Combat Systems Casualty, a loss of Navy Red and Fleet TAC. [Encl (6)]

122. The MOM deck log states at 0835 MOM restores from casualty to Navy Red. [Encl (6)]

123. There is no confirmed use of the Navy Red or Fleet TAC circuits following the restoration during the inbound S&A. [Encl (4)]

124. At 0953:19, MOM CHAT is reported down in CIC. [Encl (13)]

125. (b) (5) are not addressed in either MOM Standing Orders or NAV Bill. [Encls (8), (21)]

#### AIS Transmission

126. MOM is transmitting on AIS throughout the transit while HFY appears not to be. However, MOM SPS-73 is plotting reliable positions of HFY throughout most of the critical portions of the transit that were reviewed. HFY XO stated he had changed AIS status from Underway to Anchored after the Anchoring evolution conducted later that day, and therefore thought HFY had been transmitting AIS the entire day. [(3-2), (8), (9)]

127. HFY Navigation Bill (PARA 11) states that AIS will be set to transmit in high density traffic areas, while transmitting Traffic Separation Schemes (TSSs), and while conducting normal Condition III operations, provided that such transmission is not a contravention to an order from the CO, emission control condition, numbered fleet guidance, or would otherwise endanger the ship, its crew, or its mission. [Encl (19)]

## **RULES OF THE ROAD**

128. Per MOM Standing Order # 3 (PARA 2.a), the Commanding Officer is the only one able to authorize a deviation from COLREGS. [Encl (20)]

129. Per MOM Standing Order #3 (PARA 4.a.(1), CONNs must know COLREGS and when departures may be required. [Encl (20)]

130. At 1012:21, HFY TACOM successfully contacted MOM TACOM on BTB (b) (1)(A), (b) (5) to arrange for a PTP passage. Along with passage concurrence, MOM informed HFY that it was inbound to Naval Station North Island. [Encls (3-1), (3-4), (3-17), (4-9), (12), (14), (13)]

131. COLREGS Rule 14.(a), Head-on Situations, dictates a PTP passage for head-on Situations and HFY and MOM watchstanders assessed it applied to both ships. [Encls (3-1), (4-1), Ref(e)]

132. COLREGS Rule 9.a.i, Narrow Channels, applied to both ships and dictated that both should stay as safe as is practicable to the right side of the channel. [Ref(e)]

133. Several watchstanders interviewed believed MOM may have been (b) (5) (b) (5) VMS showed MOM on track and finally slightly left. [Encls (4), (8)]

134. HFY OOD observed a MOM target angle indicating MOM (b) (5) (b) (5) [Encl (3-4)]

135. Rule 34 applies and 5 short is appropriate when maneuvering intentions are in doubt. Rule 34 also allows for BTB coordination which HFY would attempt. [Ref(e)]

136. Rule 6 (safe speed) and Rule 8.e (slacken speed) applied once HFY doubted MOM's maneuvering intentions and the HFY CO slowed the ship to 5 knots. [Ref(e)]

137. HFY attempted bridge to bridge contact with MOM without response. HFY attempted Navy Red contact without response. [Encls (3-1), (3-4), (3-5), (3-11)]

138. At 1019, HFY CO, OOD, and NAV saw a target angle on MOM that indicated they were not maneuvering for a PTP passage. HFY CO believed MOM trajectory was to the Naval Fuel Farm. [Encls (3-1), (3-4), (3-8)]

139. HFY CO abandoned agreed upon PTP passage and believed it would lead to collision. [Encl (3-1)]

140. At 1020, both MOM and HFY maneuvered (b) (5) then two short again with some period of time between. [Encls (4-1), (6), (7)]

141. Rule 34.a.(i).(2), directs sounding one instance of 2 short, vice 2 short twice in a row. [Ref(e)]

142. IAW Rule 34, once maneuvering intentions are clear, no further signals are required. [Ref(e)]

## **SHIPPING IN SAN DIEGO HARBOR**

143. Pilots normally board vessels bound for NASNI in the vicinity of Buoy 20, but due to exceptionally busy port loading that morning, PILOT would board near Buoys 14 and 15. [Encl (5)]

144. PILOT decided to board in the vicinity of Buoys 14 and 15 to avoid trying to board during a head-on situation which he thought would likely occur if he boarded further north. [Encl (5)]

145. According to Pilot opinion, HFY and MOM met along track (b) (5). It's an area the pilots call the Triangle (to the south starting at RB 14 and GB 15 that goes north and is capped by the triangle of buoys at RBs 16, 16A, and GB 17) in which pilots try to avoid head-on situations. [Encl (5)]

#### **NAVIGATION AND NAVIGATION BRIEFS**

146. On 29 Nov, both HFY and MOM MOB-N REs were current and both teams were certified. MOM certified MOB-N on 18 NOV 22 and HFY certified MOB-N on 17 Sep 21. [Encl (24)]

147. On 29 Nov, both HFY and MOM had the required number of Navigation Fundamentals COI (A-061-0200) graduates onboard. [Encl (25)]

148. All charts in use during the 29 NOV inbound and outbound S&A Details by both MOM and HFY were the latest edition and all applicable chart corrections had been made. (Harbor Chart: H1316010 – SDGO Bay during near miss). [Encl (26)]

149. Both HFY and MOM Navigation Briefs listed NAVAREAs that were in error. HFY listed

(b) (5) [(4-8), (26), (27)]

150. Both HFY and MOM Navigation Briefs listed HYDROPAC information that was in error. MOM listed

(b) (5) To download the DNC, HYDROPAC had to be reviewed, therefore both teams failed to update their briefs, but had reviewed the HYDROPAC. [Encls (26), (27), (28)]

151. All HFY watchstanders during S&A on 29 Nov were qualified in RADM to stand their assigned watch. [Encl (29)]

152. All MOM watchstanders (b) (5) were PQS qualified for that watchstation. CONN is assignment 325 of 43492-2L. [Encl (30)]

153. HFY has accomplished all requirements of the Navigation Seamanship, and Shiphandling Training Instruction for 2022. [Ref(d), Encl (26)]

154. While MOM has not accomplished all requirements of the Navigation Seamanship, and Shiphandling Training Instruction for 2022 (28 hours short), they have required hours scheduled for December and BRM later in the month. They are on track to accomplish all requirements. [Ref(d), Encl (26)]

155. HFY Senior QM recently reported (b) (5) CPR-5 was notified during the investigation. [Ref(c)]

156. All watchstanders required by the NAVDORM were in attendance for the HFY NAV Brief. [Encls (28), Ref(b)]

157. HFY NAV Brief adhered to all requirements with the exception of the NOTE that states PQS line-items for ship control system versions should be validated, and noted in the Watch Bill section of the NAV Brief (pages B-6 to B-7), and Operational Risk Management for Grounding. [Encls (28), Ref(b)]

158. MOM's Navigation Brief muster sheet did not list the Chief Engineer or CIC Officer as required attendees, but Plant Control Office and CIC Watch Officer attended. All other watchstanders required by the NAVDORM were in attendance for the MOM NAV Brief. [Encls (4-2), (27), Ref(b)]

159. The MOM NAV Brief did not contain several areas that were required to be briefed as per the NAVDORM. Those areas not briefed depicted in the brief were: (1) Anchoring NOMOGRAPH, (2) GPS Denial/Jamming/Spoofing was not briefed during the ORM portion, (3) the NOTE that states PQS line-items for ship control system versions should be validated, and noted in the Watch Bill section of the NAV Brief (pages B-6 to B-7), and (4) Force Protection PPRs. Harbor movements were not complete because MOM was not an addressee on Harbor Movements for 29 Nov. [Encl (27), Ref(b)]

160. Neither HFY nor MOM briefed the status of AIS as part of their NAV Brief and neither ship has a line item in the underway or entering port checklist related to AIS. [Encls (27), (28)]

161. There is no requirement in the NAVDORM to brief AIS as part of the Navigation Brief. [Ref(b)]

162. HFY and MOM had slightly different tracks, but were both approved Voyage Plans. [Redacted] (b) (5) [Redacted] (b) (5). [Encls (3-8), (4-8), (8), (9)]

163. Both HFY and MOM followed standard navigation practices, such as fix intervals and the stationing of watches IAW published directives as well the chart approval process. [Encls (18), (19), (20), (21)]

#### **OFFICIAL RECORDS**

164. Per MOM Standing Order #3 (PARA 4.d), MOM's official record of events is the Deck Log, and the OOD is responsible for its accuracy. QMOW are directed to take notes with times annotated to allow for late entries into the Deck Log and accuracy of Deck Log entries should be sacrificed because of a complex environment. [Encl (20)]

165. HFY Standing Order #3 (PARA 1 and 2), states that OODs shall conduct professional Bridge-to-Bridge communications with all other vessels, including merchant and civilian ships and that they shall ensure that ALL Bridge-to-Bridge communications are logged in the BTB Radio Log. [Encl (18)]

166. HFY Standing Order #3 (PARA 1 and 2), states that OODs shall supervise the maintenance of the Deck Log. [Encl (18)]

167. HFY Navigation Bill (PARA 3) states that, subordinate to the Navigator, the Deck Log Petty Officer, shall be assigned and is responsible for the compilation, correction, and submission of the deck log. Quartermasters and inport Petty Officers of the Watch (POOW) will be instructed on the proper keeping of the deck log in accordance with applicable references, stressing neatness, accuracy of information, and the use of proper phraseology. [Encl (19)]

168. Duties related to deck logs are not similarly explicit in MOM Standing Orders or Navigation Bill. [Encls (20), (21)]

169. Written records reviewed throughout this investigation were incomplete, in error, or non-existent in many cases. [Encls (3), (4), (8), (9), (12), (13), (17)]

#### **Opinions**

#### **ACTIONS IN THE PILOTHOUSE AND CIC OF HARPERS FERRY**

1. Not all members of the HFY bridge and CIC team were qualified to stand their watch. The senior QM recently reported and did not perform a WTCC with the ISIC. While this deficiency must be quickly corrected the HFY Navigation Team provided appropriate support to the CO and this discrepancy did not contribute to the near miss. [FF (155)]
2. While the preparations to render honors with TRIPOLI was a distraction to the HFY XO, it happened well enough in advance of the meeting situation with MOM that I do not believe it contributed to the near miss. [FF (8), (9), (10), (11)]
3. Although HFY Navigator took prudent steps to verify the CO's intention to remain right in the channel, HFY likely turned too early or did not adjust their turn to be right of track. HFY did not maneuver to support a PTP passage. [FF (31), (38)]
4. Although the HFY CO failed to take into consideration the different times HFY and MOM were executing their turns and how that might look visually, from his perspective it is clear that the MOM target angle indicated MOM was not maneuvering as previously agreed upon. HFY CONN and bridge team did not ascertain bearing drift IAW HFY Standing Orders or Rule 7, however MOM Target Angle was under observation and did show MOM deviating from the agreed upon PTP passage. [FF (44), (45), (134), (138)]
5. HFY's decision to slow during the turn to 197 on the Triangle leg may have reduced the maneuverability of the ship, but provided more decision space to the CO. [FF (23), (35), (41)]
6. Because the HFY CO previously abandoned the idea that MOM was maneuvering to STBD to set up for the agreed upon PTP passage, he was slow to see that MOM's orders were taking effect and the ship was swinging to STBD as planned. By that time, HFY was already out of position to effectively conduct the agreed upon PTP passage and MOM was 875 yards away. With RB 16 on his port side his options for maneuver were limited. [FF (45), (46), (48)]
7. The HFY CO believed that the USS GRIDLEY SECURITE call in addition to MOM's target angle made him question whether MOM was headed to the Naval Fuel Farm. A quick visual scan around that portion of San Diego Harbor would have revealed to the HFY CO that MOM could not transit to that pier because it was occupied by USNS GUADALUPE. While harbor movements were available to HFY, and briefed, there was no correlation of ships to chart positions which would have enabled increased situational awareness by the entire bridge team for the transit. As a result, the CO lacked situational awareness on the location of ships in the harbor and the channel. [FF (22), (28), (44), (138)]
8. The HFY CO insufficiently conveyed his overall thoughts to the bridge team and did not practice good Bridge Resource Management (BRM). Better clarity in communication would have led to increased situational awareness to watchstanders and a higher probability of effective feedback for decision making. Witness statements, logged orders, and BTB communications demonstrate that BRM broke down and there was confusion in the pilothouse which remained until the OOD assumed the CONN. [FF (28), (29), (40), (41), (54), (61), (62)]
9. Poor BRM led to confusion in the pilothouse. In the critical moment when the HFY CO, OOD, and NAV were all giving direction to the CONN, it is clear that the situation overwhelmed the CONN and she was no longer able to effectively execute her duties. HFY NAV's communication directly to the CONN increased confusion and was not IAW the HFY Standing Orders or Navigation Bill. The HFY Standing Orders dictate the most important communication is between the CONN, MASTER HELMSMAN and LEE HELMSMAN, and all other conversations should cease during orders to the HELM and LEE

HELM. During the moments of extremis orders were confused and the HELM and LEE HELM were not fully clear which orders they were following. [FF (28), (29), (39), (40), (41), (54), (61), (62)]

10. Although the MASTER HELM did not follow all orders from the CONN, given the confusion and the direction from the HELM SAFETY, I believe the MASTER HELM discharged his duties appropriately and to the best of his ability. HFY's Standing orders make it clear that only the CONN can issue orders to the MASTER HELM or LEE HELM, however, the HELM SAFETY Officer was further confusing the situation by telling both watchstanders not to follow certain orders. [FF (61), (62), (63)]

11. In these moments of confusion, the HFY CO should have forcefully provided direction to his bridge team and reestablished proper Bridge Resource Management, however, he did not. Based on my interview, the HFY CO desired to come to the right solution to get his ship out of danger. He had two solid watchstanders in his OOD and NAV, but failed to see the confusion the discussion was causing his CONN and how his indecision put his ship in danger. [FF (28), (29), (39), (40), (41), (54), (61), (62)]

12. The orders by the HFY CO to go All Back 1/3 during his port turn and then rudder right full reduced his maneuverability when he needed it the most. Subsequently his decision to come to ALL STOP further reduced maneuverability. These actions show that HFY CO struggled in that moment to arrive upon the right solution to get HFY out of danger. The period of indecision lasted for almost 1 minute and the rate of closure was about 333 yards every minute. [FF (35), (36), (39), (41), (73)]

13. The HFY XO did not provide adequate forceful backup to the CO during this evolution and should have been more engaged to help resolve the situation. [FF (9), (11)]

14. The HFY OOD, at the critical moment, recognized that the CO was not taking effective action to prevent collision, believed he had the best situational awareness, and took proactive and effective action when he took the CONN. Further the HFY OOD made a strong decision to maneuver to port. His decision was an incredibly brave one, the correct one, and was the second critical step that prevented collision that day. [FF (39), (45), (68), (69), (70), (71), (73)]

15. HFY OOD's decision to shift his rudder at approximately the same time as MOM CO was the third and final critical step, well timed and executed, and necessary to prevent collision. Both units likely needed to take action to avoid collision. [FF (68)]

16. The forceful backup provided by the HFY NAV and OOD was exactly the type of support they should have provided to their CO and is an affirmation of the HFY bridge team emphasis on training and the robust changes made in Surface Navy OOD training since the events of FITZGERALD and JOHN S MCCAIN. [FF (39), (68)]

17. The HFY CIC did not provide adequate support to bridge in the critical moments when the bridge doubted MOM maneuvering intentions. One attempt on Navy Red or SIPR CHAT was insufficient. Further HFY CIC watchstanders failed to adequately determine the CPA, and provide backup per HFY Standing Orders. HFY CIC should have articulated the danger of meeting in the narrow channel. HFY CIC was disconnected and did not know the degree of concern of the bridge team. [FF (29), (30), (115)]

18. The Class CHARLIE Fire in CIC likely occurred after the OOD had assumed the CONN and played no part in the confusion leading up to the point of turning to port. CIC was not in a supporting role to the bridge for the remainder of the S&A detail. [FF (29), (30), (76), (115)]

#### **ACTIONS IN THE PILOTHOUSE AND CIC OF MOMSEN**

19. Not all members of the MOM bridge and CIC team were qualified to stand their watch, specifically the CONN did not have a qualification evident in RADM. Regardless, the performance of the CONN in the moment of extremis showed he was sufficiently proficient to navigate safely. The lack of qualification in RADM did not contribute to this near miss. [FF (151), (152)]
20. Preparations to render honors may have been a distraction to the MOM and HFY XO, and reduced their situational awareness, but I do not believe it substantially contributed to the near miss. [FF (9)]
21. I do not believe MOM's Degaussing Range run contributed to the near miss. [FF (5), (102), (104)]
22. The decision to take the Pilot in the vicinity of buoys 14 and 15 restricted MOM's turn to STBD during a critical period when MOM should have been free to maneuver in preparation for the PTP passage. The CO should have delayed receiving the pilot until after the PTP passage was completed. MOM's resulting late turn to 015 led the ship to be in violation of Rule 9.a.i. MOM showed a target angle while embarking the Pilot for almost 1.5 minutes that indicated they would not be able to comply with the PTP passage. [FF (5), (13), (24), (27), (28), (44), (48), (49), (143)]
23. Per MOM Standing Orders, MOM CIC watchstanders failed to determine the CPA, to include intercept time, in order to give effective watchteam backup. MOM CIC should have been cognizant that MOM would meet HFY in one of the least favorable parts of the narrow channel, and communicate that concern. [FF (79)]
24. MOM CO's quick decision and order to turn to port was the first critical step that avoided collision. Additionally, the order was correct. [FF (59)]
25. MOM CIC's situational awareness during the moments before the CO decided to turn to port was low. The bridge team did a poor job of keeping CIC apprised of developments in the pilothouse. [FF (79), (88)]
26. MOM CO's decision to shift his rudder at approximately the same time as HFY OOD was the 4th and final critical step, well timed and executed, and necessary to prevent collision. It took approximately 90 seconds, for MOM's actions to result in safe passage. Both units likely needed to take action to avoid collision. [FF (59), (68)]
27. MOM's pilothouse appeared very measured and calm during this near miss albeit tense. The team performed very well during a moment of extremis. [FF (1) – (81)]

### **COMMUNICATIONS**

28. The multiple examples of watchstanding errors related to TACOM in this near miss demonstrate that the watchstation on both ships lacked formality and were deficient in procedural compliance. [FF (15), (85), (86), (90), (112), (113)]
29. Neither ship addresses TACOM responsibilities in their Standing Orders, Navigation Bill, or other written shipboard instruction. [FF (90), (91), (95), (96)]
30. MOM did not have positive control of BTB. The TACOM, by SOP, was able to take action on BTB channels without announcing that action to the Bridge Team; the TACOM lacked forceful backup to ensure the right channels were monitored. [FF (85), (86), (90), (107)]
31. The MOM TACOM JQR and to a lesser extent, the HFY JOOD JQR, did not adequately prepare TACOM watches to stand TACOM during S&A. MOM JQR has no line items related to setting BTB

channels. Additionally, TACOM is able to qualify without any demonstration of channel switching proficiency. [FF (94)]

32. The order of actions to maintain proper situational awareness on BTB Channels in the MOM pilothouse, while simplistic in terms of physical actions, could quickly become confusing during times of increased stress. [FF (85), (86), (90), (107)]

33. TACOM watches are focused on BTB and not on other circuits that may be necessary during special evolutions such as (b) (5). The Tactical Communicator's job is to ensure Tactical Communications are maintained during S&A, but those duties are not exclusively their own as they are shared with CIC. [FF (b) (5) (85), (86), (90), (107)]

34. Requesting HFY CIC to contact MOM via (b) (5) was appropriate in the situation. [FF (29), (114)]

35. Because on the MOM there was no logged communication on (b) (5) following the logged casualty, I do not believe that (b) (5) was fully restored or that MOM was monitoring (b) (5) during the inbound transit. I have no opinion on (b) (5) as it wasn't utilized by either ship. The bridge and CIC team on MOM did a poor job keeping track of the status of (b) (5) (b) (5) which were all avenues of communication with other warships in San Diego harbor. [FF (115), (121), (122), (123)]

36. While MOM was transmitting on AIS and HFY was not, extensive review of information available to both bridge teams indicates that lack of AIS utilization by HFY played no part in this near miss. AIS could have been helpful to CIC to determine relative meeting locations. HFY should have been transmitting on AIS that day per the HFY Standing Orders. [FF (126), (127)]

37. Many combat systems casualty restorations are verified by observing power to a given piece of equipment, but communications systems restoration verification requires positive communications with another unit. Troubleshooting should continue until positive two-way communications are restored. [FF (123)]

38. The entering port checklist utilized by MOM was not sufficiently thorough to verify that all applicable circuits necessary were available for use. [FF (160)]

39. Each ship experiences their own unique loss of satellite coverage in different parts of the world over a ranges of courses. Those block zones should be briefed to Bridge and CIC watchstanders for expected periods of communications degradations to satellite circuits in NAV briefs. [FF (155), (156), (160)]

40. HFY had a dedicated TACOM monitoring BTB who should have heard (b) (5) from the USS GRIDLEY in order to convey the contents of that communication. If properly executing their duties the mix-up of GRIDLEY and MOM would have been unlikely. [FF (22), (28)]

41. After comparing available audio and video logs it is most likely that MOM TACOM switched to CH 12 on the primary BTB handset and did not switch (b) (1) (A), (b) (5) when contacting pilot TRACTOR 7, and therefore MOM did not monitor BTE (b) (1) (A), (b) (5) from 1014:46 until as late as 1019:53, a period of over 5 minutes. No other BTB handhelds are set to (b) (1) (A), (b) (5). Alternatively, the secondary and tertiary channels were turned down too low to hear, or both speakers were malfunctioning. [FF (86), (90), (101), (107), (108), (109), (110), (111)]

42. Regardless of how MOM chose to set up their bridge-to-bridge speakers in the pilothouse, their handheld bridge-to-bridge should have been used in a backup capacity to monitor (b) (1)(A), (b) (5) [FF (108)]

43. During the course of this Preliminary Inquiry, both teams expressed doubt about the accuracy of AIS and SPS-73. Reviewing VMS logs with time stamps that differed by only a second, MOM AIS information displayed on HFY VMS and SPS-73 tracks displayed on MOM VMS indicated each system was plotting the other unit in almost the exact locations when compared to ground truth for respective ships in VMS. Those systems performed admirably during this near miss. [FF (25), (34), (38), (57), (67), (126), (127)]

### **RULES OF THE ROAD**

44. HFY's proposal and subsequent agreement by MOM to a PTP passage was well executed and prudent to the expected Rule 14.(a) for head-on approaches. [FF (12)]

45. I believe both HFY and MOM's level of knowledge of Rule 9, Narrow Channels, was adequate enough to prevent this near miss from occurring. MOM's application of Rule 9.a.i, Narrow Channels, was well executed until the turn to Course 015 IVO buoys 14 and 15. The departure of TRACTOR 7 from the STBD bow in the moments after MOM passed through its turn bearing caused it to turn late. With a speed of 7 knots over ground, MOM's rudder was less effective forcing MOM 3 yards left rather than slightly right. Consequently, MOM was not in compliance with Rule 9.a.i. [FF (49), (143), (144), (145)]

46. HFY's turn from course (b) (5) was also not in compliance with Rule 9.a.i, Narrow Channels, and upon steadying the ship was 20 yards left of track rather than slightly right. [FF (22), (26), (57)]

47. Some warship COs in San Diego are uncomfortable with a turn that results in being too far to the right when coming to the (b) (5) as it swings the STBD quarter towards GB 17. This reluctance is previously noted by San Diego pilots. [FF (24), (143), (144), (145)]

48. Approximately 90 seconds passed between hearing the SECURITE call by USS GRIDLEY and HFY attempting a BTB call to MOM of (b) (1)(A), (b) (5). During this time the HFY CO doubted the maneuvering intentions of MOM. After unsuccessful comms with MOM, HFY should have sounded 5 short blasts in accordance with Rule 34. The HFY CO belief that they lacked time to sound 5 short is likely a result of attempting to contact MOM over BTB during the quiet 90 seconds. [FF (135), (136), (138), (139)]

49. The decision by HFY to slow during the turn to (b) (5) was prudent and in accordance with Rules 8.e, actions to avoid collision. [FF (23)]

50. The decision by the HFY CO to violate Rule 9.a.i was based on his best judgement but contributed directly to the near miss. [FF (38), (132)]

51. HFY CO did not appreciate that MOM would turn later and expected to see MOM already turning or already turned with a target angle showing MOM's port bow. Seeing the ~~HFY~~ STBD bow convinced HFY CO that PTP passage was not possible. Although still a violation of Rule 9.a.i, the HFY maneuver was not unreasonable given his desire to avoid collision. [FF (133), (134), (138), (139)]

52. Sounding 5 short IAW Rule 34 may have resulted in a collision. The proximity between MOM and HFY when MOM CO doubted intentions was approximately (b) (5) with the rate of closure and general HFY bridge confusion, collision may have occurred. The MOM CO's decision to state his

intention to maneuver to port was correct, however, he should have sounded two short blasts. [FF (53), (54), (60), (135)]

(b) (5)

54. Once HFY acknowledged MOM's maneuver to port, Rule 34 no longer applied, and all further actions between HFY and MOM were IAW the Rules of the Road. [FF (118), (119)]

#### **SHIPPING IN SAN DIEGO HARBOR**

55. The leg in the narrow channel in San Diego Harbor between Buoys 14 and 15, and the "Triangle" at buoys 16, 16A, and 17 is the least favorable leg for a meeting between two warships. Inbound warships who take a Pilot south of Buoys 14 and 15 unnecessarily reduce their decision space and room to maneuver due to the proximity of the turn to Starboard at Buoys 14 and 15. [FF (24), (145)]

56. The joint decision to take on a pilot south of buoys 14 and 15 unnecessarily reduced MOM maneuverability to remain right in the channel as it turned to STBD onto the 015 leg. [FF (5), (13), (24), (27), (28), (44), (48), (49), (143)]

57. Situational awareness of the Pilots in their tractors is not as high as the CO in the pilothouse; the responsibility to minimize meetings in that area rests with the CO, even if taking a pilot. [FF (5), (13), (24), (27), (28), (44), (48), (49), (143)]

58. The investigator was surprised to learn the extent that San Diego pilots prefer avoiding meeting in the "Triangle" narrow channel. Neither bridge or CIC team on MOM or HFY had the same perspective as the San Diego Pilots, just a general concern for any meeting anywhere in the harbor. [FF (24), (145)]

#### **NAVIGATION AND NAVIGATION BRIEF**

59. Both HFY and MOM conducted briefs with all proper attendees on 28 NOV. There are elements of the NAV Brief that require additional granularity, such as TACOM and AIS, and can be improved to reduce risk during transits. [FF (148), (149), (150), (157), (158), (159), (160), (161)]

60. MOM's lack of situational awareness regarding HFY's outbound transit at the Navigation Brief contributed because it added to the confusion. However, the MOM team actively sought to clarify harbor movements in the intervening hours after the Navigation Brief. Watchstanders were aware of HFY's outbound transit prior to setting S&A. [FF (b) (5) (159)]

61. While the use of slightly different tracks between two ships meeting on such a short leg is less than ideal, if properly followed Rules 9.a.i mitigates any risk associated with different way points utilized by the respective Navigation teams. [FF (162)]

62. Both HFY and MOM Navigation Teams properly approved the Voyage Plan in VMS and the charts in use did not contribute to this near miss. [FF (162)]

63. Although HFY and MOM had discrepancies related to (b) (5) as part of the Navigation brief, they did not contribute to this near miss. [FF (149), (150)]

64. Had HFY known about, and briefed that, San Diego Pilots board inbound vessels to NASNI in the vicinity of buoy 20, it may have increased their situational awareness particularly when the OOD noted the tugs into the vicinity of MOM. [FF (143)]

65. AIS is one more aid that should be added to the NAV Brief and underway checklist to increase situational awareness of bridge teams. [FF (160), (161)]

66. The (b) (5) from USS GRIDLEY was not performed correctly as San Diego Harbor does not have a Traffic Separation Scheme. [FF (22)]

### **OFFICIAL RECORDS**

67. HFY BTB log keeping was non-existent and contributed to the breakdown in Bridge Resource Management. If a log had existed from MOM's previous (b) (5) at 0950, HFY CO could have reviewed it for better clarity, even if confused about the (b) (5) source. Had the HFY TACOM logged the meeting between MOM and TRACTOR 7 in the vicinity of buoys 9 and 10, it would have provided situational awareness for the OOD. [FF (166), (167), (168), (169)]

68. The (b) (5), (b) (6) were all deficient in their duties in maintaining a proper deck log of events in the respective pilothouses. Both HFY and MOM deck logs were filled with missed log entries and errors in logged entries. [FF (166), (167), (168), (169)]

69. MOM Standing Orders and Navigation Bill are not explicit about which billet owns daily maintenance of the Deck Log; Navigator is presumed to be responsible. [FF (166)]

70. HFY OOD directed his bridge team to utilize BTB correctly IAW the HFY Standing Orders, however, he did not ensure proper maintenance of the BTB Radio Log. [FF (167), (168)]

71. Both ships lacked the robust documentation necessary to quickly ascertain what occurred during this near miss, something that could be remedied given the technology available to the surface force. [FF (166), (167), (168), (169)]

72. Without a voice recorder or video camera in the pilothouse to verify witness statements, the memories of almost everyone in both pilothouses was often suspect. Only through triangulation and diligent reconstruction of events from multiple sources was I reasonably able to piece together memories and recreate orders from critical watchstations, particularly onboard HFY. [FF (166), (167), (168), (169)]

### **Recommendations**

#### **1. Specific recommendations related to communications:**

a. Clarify roles and responsibilities related to communications during S&A. CIC is the guard on Navy Red and SIPR Chat, which are the secondary communications for the bridge. Consider describing the watch in the pilothouse as the BTB and Maneuvering Communications Watch Officer (BMO) while all tactical circuits (TACOM) remain with CIC under the CICWO.

b. Formalize the TACOM watch via TYCOM guidance similar to other critical watchstanding positions in the pilothouse for S&A. Specifically:

(b) (5)

ii. Require notification to the CO and bridge team when shifting from (b) (5), (b) (1) (A) during S&A. Alternatively (b) (5), (b) (1) (A) can be directed to be monitored via a handheld BTB radio.

iii. Recommend TYCOM develop a formal BMO PQS assignment and require in that assignment demonstration of guarding, monitoring, changing channels, and announcing BTB channel locations to the pilothouse team, as well as briefing expected communications as part of the Navigation Brief.

iv. Direct MOM to immediately formalize their procedures for BTB communications in the CO's Standing Orders.

2. Specific recommendations related to BRM and formal schoolhouse trainings:

a. Direct BRM COIs to continue to emphasize the importance of the CO sharing their concerns with their bridge teams as part of BRM. (b) (5)

b. Continue to create learning simulations that place bridge teams in meeting situations where ships turn at different times, particularly for short legs (less than 1500 yards), to show how target angles change and impact the decision-making process.

c. Recommend training organizations be provided the VMS enclosures for both HFY and MOM to create training scenarios that analyze and discuss rudder and engine orders before and during their respective alterations of course.

4. Recommend TYCOM direct all SURFOR units to clarify the following in their Standing Orders:

a. (b) (5)

b. Clarify hierarchy of communications in the Pilothouse during S&A: 1) CO, 2) CONN-HELM-LEE HELM, 3) OOD, 4) NAV.

c. Clarify that NAV makes reports to the CO, CONN, and OOD, but does not give orders to the CONN. CONN takes orders from the OOD, and from the CO when appropriate.

d. If not explicitly stated, give the OOD the authority to relieve and assume the CONN.

e. (b) (5)

f. Formally shift responsibilities for TACOM to the CICWO and charge them with ensuring Navy RED and SIPR CHAT are available at all times to supporting secondary communications for determining maneuvering intentions.

5. For Navigation Briefs, I recommend the following for the next NAVDORM update:

a. Ships correlate Harbor Movements messages with their specific destination on charts with a graphical depiction during the Navigation Brief.

(b) (5)

c. TYCOM engage with Pilots in every Fleet Concentration Area and determine the areas the Pilots are most concerned with for meeting situations and require those areas to be specifically highlighted during Navigation Briefs, to include discussions of actions during potential meeting situations and Bail Out Plans.

d. Direct CICWO to brief immediate actions for loss of communications, fires in CIC, or other emergencies determined by TYCOM.

e. Add energizing AIS (at COs discretion) to Appendix C for both getting underway and entering port.

f. Adjust all communications related line items in Appendix C to provide more specificity as it relates to setting up and testing circuits. Recommend explicitly stating:

i. 24 hours

1. COMM plan patched in to all appropriate circuits (Radio)
2. Handsets tested (Radio)

ii. Upon Setting S&A

1. B2B/FLT TAC Volume control verified (BMO)
2. B2B/FLT TAC Positive two way communications verified and logged (BMO)
3. NAVY RED/SIPR CHAT Positive two way communications verified and logged (CICWO/TACOM)

g. Add briefing AIS status and AIS intentions for use in every Navigation Brief.

h. For times when BTB, FLT TAC, Navy RED, or SIPR CHAT (and any other circuit deemed appropriate) suffer a casualty, I recommend formally placing responsibility for verifying restoration, on the BMO for BTB and FLT TAC, and on the CICWO for Navy RED and SIPR CHAT. I recommend for both watchstanders to formally brief their expected actions for loss of comms during the Navigation Brief.

(b) (5)

j. In Appendix C, 96 hours prior to entering port, ensure your unit is on the distribution list for that Fleet Concentration Areas Harbor Movements Message.

k. Establish the requirement for all Navigation Briefs to graphically depict the locations of pilot pickup points for the respective harbor and task the Navigator to describe for the bridge team the types of tugs or pilot boats they can be expected to see to the best of their ability with information that can be gathered. For San Diego, display the Pilot Pickup for NASNI and 32<sup>nd</sup> Street at buoy 20 and the Coronado Bridge respectively.

1. Add to Appendix C a requirement for the Navigator to review deck and BTB logs and the CIC Officer to review all CIC logs within 24 hours of completion of the S&A detail and report any discrepancies to the CO with a plan for correction. Both checklists will not be considered complete and ready for Navigator retention until the CO has been briefed. In addition, add a requirement for the NAV and CICWO to brief any discrepancies observed during the last S&A for logs at the next NAV Brief.

6. SURFOR should continue to invest in situational awareness tools that plot on VMS like AIS and SPS-73.

7. Require all San Diego bridge teams to review the San Diego Pilot brief regarding areas of elevated risk in San Diego and receive a formal brief. Require a similar brief for all Fleet Concentration Areas with a similar opportunity to review local Pilot briefing information.

8. Notify USS GRIDLEY regarding the TSS error made when they made their SECURITE call on 29 NOV.

9. SURFOR should mitigate the difficulties associated with near miss or mishap event investigations related to log keeping by investing in audio and video recording tools for both the pilothouse and CIC.

10. Recommend continued emphasis by the COs and ISICs of both ships to improve deck, CIC, and BTB logs and to continue to review these as part of training and assessments.

11. Recommend MOM, in their upcoming BRM and SET, practice scenarios of evaluating target angles and bearing drift while in a turn.

12. Specific recommendations related to personnel:

a. Recommend the HFY OOD be recognized for his action to maneuver HFY clear of danger. Additionally, recommend he receive appropriate training related to logs and the failure to comply with the rules and improper sounding of 2 short blasts.

b. Recommend the MOM CONN be recognized for his performance in a high stress situation, especially since 29 Nov 22 was his first time as CONN during an S&A.

c. Recommend the MOM OOD and MOM NAV be recognized for making solid recommendations to the CO regarding maneuvering and application of the Rules, and keeping a calm and professional pilothouse.

d. Recommend the HFY NAV be recognized for her decisive actions to maneuver HFY clear of danger.

e. Recommend the HFY MASTER HELM and LEE HELM be recognized for their actions up to and after the HFY OOD took the CONN and maneuvered HFY into safe waters.

f. Do not recommend administrative actions against HFY CONN. She should be given the continued opportunity to learn from this situation and continue to her next board where she can be assessed based on her professional growth whether she is ready for more advanced qualifications.

g. Recommend you consider the HFY CO's actions to determine if any further administrative action is required. Specifically, the HFY CO's decision not to sound five short blasts, the lack of decisiveness during the period in which he backed, stopped, backed engines again, and ordered right full rudder, and the failure to sound three short blasts when operating astern propulsion.

h. Recommend you consider the HFY XO's actions to determine if any further administrative action is required. Specifically, the HFY XO's lack of forceful backup to the CO in the moments leading up to extremis.

i. Recommend you consider the HFY HELM SAFETY's actions to determine if any further administrative action is required. Specifically, the HFY HELM SAFETY's direction to the MASTER HELM and LEE HELM to disregard orders from the CONN.

j. Recommend you consider the MOM TAO and CICWO's actions to determine if any further administrative action is required. Specifically, their failure to properly verify positive two-way communications had been restored on Navy RED and CHAT.

k. Recommend you consider the HFY TAO and CICWO's actions to determine if any further administrative action is required. Specifically, their failure to maintain situational awareness on the events unfolding in the pilothouse and did not aggressively attempt to establish comms with MOM.

l. Recommend you consider the MOM TACOM's actions to determine if any further administrative action is required. Specifically, MOM TACOM's failure to keep a proper watch on BTB.

(b) (5)

