DEPARTMENT OF THE NAVY
COMMANDER EXPEDITIONARY STRIKE GROUP THREE
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SAN DIEGO CA 92136-5090

5800
Ser N00J/258
2 Nov 23

From: Commander, Expeditionary Strike Group THREE
To: File

Subj: COMMAND INVESTIGATION INTO THE MAIN REDUCTION GEAR CASUALTY THAT OCCURRED ONBOARD USS BOXER (LHD 4) ON 11 JULY 2023

Ref: (a) JAGINST 5800.7G

Encl: (1) (b) (6) ltr of 4 Aug 23 (w/encls and ends)
(2) ESG-3 ltr 5800 Ser N00J/006 of 6 Jan 23 and (b) (6) ltr of 27 Dec 22 (w/encls and ends)
(3) ESG-3 ltr 5800 Ser N00J/183 of 3 Aug 23
(4) ESG-3 ltr 5800 Ser N00J/214 of 7 Sep 23 and (b) (6) ltr of 3 Jun 23 (w/encls and ends)
(5) ESG-3 ltr 5800 Ser N00J/245 of 17 Oct 23 and (b) (6) ltr of 7 Jul 23 (w/encls and ends)

1. Enclosure (1) has been reviewed in accordance with reference (a). The following information is provided as background. Specific discussion of this investigation begins in paragraph 6.

2. On 6 January 2023, my predecessor closed out the command investigation (CI) into damages to 1A and 1B forced draft blowers (FDB) that occurred on 8 November 2022 aboard USS BOXER as noted in enclosure (2). This was the first of three investigations into engineering casualties that were caused by a lack of procedural compliance, substandard supervisory oversight, and general complacency by the crew. My predecessor took administrative action on the previous commanding officer (CO), CAPT Matthew Cieslukowski and the (b) (6) (b) (6) to reinforce the foundational principles of adherence to procedural compliance.

3. On 3 August 2023, I withheld disposition authority on three USS BOXER engineering investigations based on a second engineering casualty (noted below) and a third engineering casualty that occurred on 11 July 2023 involving a casualty to the main reduction gear (MRG) as well as another incident involving two senior enlisted Sailors in the engineering department. Enclosure (3) pertains.

4. On 7 September 2023, I closed out the CI into the boiler safety casualty that occurred on 14 May 23 aboard USS BOXER as noted in enclosure (4). The investigation once again revealed a lack of procedural compliance and overall complacency of all personnel involved in

the boiler light off event. In my closeout letter to this investigation, I deferred administrative and/or disciplinary action until a review of enclosure (4) and the investigation into the MRG casualty were complete.

5. On 17 October 2023, I closed out the CI into allegations of assault and failure to report previous incidents of assault within USS BOXER engineering department as noted in enclosure (5). This investigation revealed not only a failure by senior personnel to uphold military standards, but also revealed other issues related to the standing of the engineering officer of the watch (EOOW) position. In my closeout letter to this investigation I deferred administrative and/or disciplinary action until a review of the MRG casualty investigation was complete.

6. Regarding the MRG casualty investigation, I reviewed the investigating officers (IO) CI of 4 August 2023 and I approve the findings of fact, opinions, and recommendations of the IO except as modified below.

7. Executive Summary. On 11 July 2023, NR2 MRG turning gears were operating without lube oil for approximately two hours. The subject CI captures the actions and inactions taken by USS BOXER engineering personnel prior to and upon discovery of the casualty. Despite two previous major engineering casualty incidents within eight months, USS BOXER engineering department personnel continued to deviate from sound engineering practices and failed to apply lessons learned from previous engineering casualties. All watchstanders displayed an appalling lack of procedural compliance and general complacency in this casualty to NR2 MRG with the exception of (b) (6) displayed a questioning attitude and level of knowledge that ultimately kept the ship from experiencing extensive damage to NR2 MRG. Despite multiple training assist visits by Afloat Training Group (ATG) and Engineering Assessments Pacific (EAP) from January 2022 through 5 May 2023, USS BOXER engineering leadership failed to correct cited deficiencies and implement the recommendations of the training teams. This investigation uncovered multiple concerning factors that are consistent throughout all USS BOXER engineering investigations including the lack of a robust qualification process, lack of ownership by engineering personnel, poor logkeeping, failure to adhere to written orders and/or inadequate standing orders, lack of proper engineering watch turnovers, inadequate supervision and leadership by senior engineering personnel, and, in this case, a failure to report an engineering casualty in a timely manner. Every level of senior engineering leadership failed to provide a safe, professional, and procedurally compliant work environment in engineering department. These failures had direct, measurable impacts on USS BOXER's upcoming deployment and impeded the overall accomplishment of the strike group's mission. The Navy's Pacific Fleet was less ready and less capable because of USS BOXER's shortfalls.

8. Findings of Fact. I concur with facts 1 through 126 without modification.

9. Opinions. I concur with opinions 1 through 49 without modification.

10. Recommendations. I concur with the IO's recommendations except as modified below:

a. Recommendation 1 is disapproved. On 8 September 2023, USS BOXER had a change of command during which CAPT Brian Holmes took command. As such, CAPT Cieslukowski has

transferred outside the Strike Group. In lieu of a letter of instruction (LOI), I documented his deficiencies in a special transfer evaluation. I intend to issue a LOI to CAPT Holmes regarding his inability to fulfill his duties as Executive Officer (XO) by his failure to ensure the engineering training team (ETT) was functioning properly and his failure to ensure an accurate annual review of records was completed. As the current CO, CAPT Holmes must continue to lead the ship and engineering department in their efforts to ensure procedural compliance and sound engineering watchstanding practices.

b. Recommendation 2 is modified in part. A bi-weekly report will be provided by USS BOXER CO to ESG-3 via Commander, Amphibious Squadron FIVE (CPR-5) to address the status of all recommendations contained in this CI.

c. Recommendation 3 is disapproved. The current XO, CAPT Jason Tumlinson reported aboard USS BOXER on 14 August 2023 and was not present for any of the engineering casualties. Therefore I do not intend to issue him a LOI.

d. Recommendation 5 is disapproved. Although CMDCM Ramiro has only been onboard since February 2023, two engineering causalities occurred while he has been onboard. Additionally, the incident identified in enclosure (5) indicates that senior enlisted personnel have not been performing adequately and lack the leadership skills expected from a chief petty officer. I defer to CPR-5 to determine if any administrative and/or disciplinary action is warranted.

e. Recommendation 7 is disapproved. I am disturbed by the lack of involvement by (b) (6) (b) (6) as the main propulsion assistant (MPA). As the MPA (b) (6) is the most experienced engineer onboard, second only to the chief engineer, with over 27 years of Naval service. (b) (6) lack of involvement and failure to ensure qualifications calls into question (b) (6) ability to remain in (b) (6) position. (b) (6) was present for all three engineering casualties and failed to ensure proper training and oversight of engineering personnel and equipment. Additionally, (b) (6) was derelict in (b) (6) duty as the ETT leader and did not provide forceful backup to the chief engineer. All of these events combined show gross negligence in (b) (6) duties as the MPA. As such, I intend to initiate DFC proceedings.

f. Recommendation 8 is partially approved. Prior to initiating detachment for cause proceedings for (b) (6) I direct CPR-5 to review (b) (6) involvement in the prior casualty incidents noted in enclosures (4) and (5) and determine if any other administrative and/or disciplinary action is warranted.

g. Recommendation 9 is partially approved. Prior to issuing (b) (6) formal written counseling, I direct CPR-5 to review (b) (6) involvement in the prior casualty incidents noted in enclosure (5) to determine if any other administrative and/or disciplinary action is warranted.

h. Recommendations 4, 6, and 10 through 26 are approved as written. I direct CPR-5 to provide increased oversight and ensure completion of these actions no later than 15 December 2023 and provide continuous formal monthly updates to me on the continued progress of USS BOXER engineering department until further notice.

11. Additional actions. By this letter, I direct the following:

a. (b) (6) – I direct CPR-5 to review enclosures (4) and (5) and determine whether administrative and/or disciplinary action is warranted. Although (b) (6) was TAD off the ship when the MRG casualty occurred, (b) (6) was present for the boiler safety casualty. As the senior enlisted engineer aboard USS BOXER, (b) (6) has a responsibility to lead and train junior engineering personnel and control the engineering plant. (b) (6) failed miserably in this regard. (b) (6) also blatantly disrupted the engineering watch team by attempting to move watchstanders from their positions despite a watchbill signed by the commanding officer. (b) (6) was also the subject of allegations of assault which lead me to believe that (b) (6) should not be in a leadership position in any capacity.

b. (b) (6) – In addition to the information noted in paragraph 10.f. above, I direct CPR-5 to review (b) (6) actions/inactions in enclosures (4) and (5) and determine whether administrative and/or disciplinary action is warranted. Of all the chief petty officers in engineering, (b) (6) has been aboard USS BOXER the longest, for over four years. Instead of being an asset and fountain of knowledge, (b) (6) has been counseled on numerous occasions for (b) (6) deficiencies. As noted in enclosure (5), (b) (6) decision to leave (b) (6) watch station as the EOOW to have a discussion in the escape trunk shows a complete lack of situational awareness and disregard for the basic watchstanding principles expected of all Sailors. (b) (6) left junior watchstanders in the compromising position to make significant engineering decisions in (b) (6) absence.

c. (b) (6) – I direct CPR-5 to review enclosure (4) and determine whether administrative and/or disciplinary action is warranted.

d. (b) (6) – I direct CPR-5 to review enclosure (5) and determine whether administrative and/or disciplinary action is warranted.

e. (b) (6) – I direct CPR-5 to review enclosures (4) and (5) and determine whether administrative and/or disciplinary action is warranted.

f. (b) (6) – I direct CPR-5 to review enclosure (4) and determine whether administrative and/or disciplinary action is warranted.

g (b) (6) I direct CPR-5 to review enclosure (5) and determine whether administrative and/or disciplinary action is warranted.

h. (b) (6) I direct CPR-5 to review enclosure (4) and determine whether administrative and/or disciplinary action is warranted.

i. (b) (6) - I direct CPR-5 to review enclosure (1) and determine whether administrative and/or disciplinary action is warranted.

Subj: COMMAND INVESTIGATION INTO THE MAIN REDUCTION GEAR CASUALTY THAT OCCURRED ONBOARD USS BOXER (LHD 4) ON 11 JULY 2023

12. No further action on the command investigation is necessary. This matter will be retained at Expeditionary Strike Group THREE for two years.

(b) (6)

Copy to:
COMPHIBRON FIVE

4 Aug 23

From: (b) (6), USN
To: Commander, Expeditionary Strike Group THREE

Subj: COMMAND INVESTIGATION INTO THE MAIN REDUCTION GEAR CASUALTY THAT OCCURRED ONBOARD USS BOXER (LHD 4) ON 11 JULY 2023

Ref: (a) JAGMAN Chapter II
(b) CNSP/CNSLINST 3040.1A CH-1, Surface Force Critiques, 15 Nov 2021
(c) TECHMAN Gear, MP Reduction, LHD-1 Class, S9241-C5-OMI-010
(d) NSTM 241
(e) NSTM 262
(f) TECHMAN Main Lube Oil Pump (Type 525TS) S6226-AA-MMA-010
(g) OPNAV INSTRUCTION 3120.32D CH1 SORM
(h) CNSP/CNSLINST 3540.3, EDORM
(i) NAVEDTRA 43708 PQS Standards for LHD 1 Main Propulsion
(j) CNSP/CNSL 3500.5B Watchstander's Guide
(k) Command Investigation into Damages to 1A and 1B Forced Draft Blowers Onboard USS BOXER (LHD 4)
(l) MILPERSMAN 1611-020 Officer Detachment for Cause

Encl: (1) Appointing Order of 11 July 2023
(2) Extension Letter of 27 July 2023
(3) Acronym List
(4) Rights Advisement and Interview Transcript ICO CAPT Matthew Chieslukowski of 21 Jul 23
(5) Rights Advisement and Interview Transcript ICO CAPT Brian Holmes of 20 Jul 23
(6) Rights Advisement and Interview Transcript ICO (b) (6) of 20 Jul 23
(7) Rights Advisement and Interview Transcript ICO CMDCM Jose Ramiro-Guzman of 20 Jul 23
(8) Rights Advisement and Interview Transcript ICO (b) (6) of 20 Jul 23
(9) Rights Advisement and Interview Transcript ICO (b) (6) of 20 Jul 23
(10) Rights Advisement and Interview Transcript ICO (b) (6) of 20 Jul 23
(11) Rights Advisement and Interview Transcript ICO (b) (6) of 20 Jul 23
(12) Interview Transcript ICO (b) (6) of 20 Jul 23
(13) Interview Transcript ICO (b) (6) of 20 Jul 23
(14) Interview Transcript ICO (b) (6) of 19 Jul 23
(15) Interview Transcript ICO (b) (6) of 20 Jul 23
(16) Interview Transcript ICO (b) (6) of 19 Jul 23
(17) USS BOXER (LHD 4) Incident Critique (Initial) of 13 Jul 23

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CUI Categories:	PRVCY, INV, PRIVILEGE
Dissemination Control:	FEDCON
POC:	N00J, 619-556-3786

Subj: COMMAND INVESTIGATION INTO THE MAIN REDUCTION GEAR CASUALTY THAT OCCURRED ONBOARD USS BOXER (LHD 4) ON 11 JULY 2023

(18) USS BOXER (LHD 4) Incident Critique (Revised) of 18 Jul 23
(19) Component Procedure, Main Engine Jacking Gear, (MEJG/0172/010421)
(20) CAPT Matthew Chieslukowski Biography
(21) CAPT Brian Holmes Biography
(22) CMDCM Ramiro-Guzman Biography
(23) ATGSD End of Mission Report, 24-28 Jan 22
(24) ATGSD End of Mission Report, 7-9 Feb 22
(25) ATGSD End of Mission Report, 25 May – 1 Jun 22
(26) ATGSD End of Mission Report, 8-17 Jun 22
(27) ATGSD End of Mission Report, 30 Jun – 1 Jul 22
(28) ATGSD End of Mission Report, 18-22 Jul 22
(29) ATGSD End of Mission Report, 22-26 Aug 22
(30) ATGSD End of Mission Report, 3-7 Oct 22
(31) ATGSD End of Mission Report, 27 Feb – 3 Mar 23
(32) ATGSD End of Mission Report, 27-31 Mar 23
(33) ATGSD End of Mission Report, 11-22 Apr 23
(34) ATGSD End of Mission Report, 24 Apr – 5 May 23
(35) BOX Engineering Training Team Designation Letter of 19 Aug 22
(36) USS BOXER (LHD 4), EDORM, CH-1, 27 Jan 20
(37) USS BOXER (LHD 4), Engineering Logs, 10 – 13 Jul 23
(38) Engineering Inport Duty Section Roster
(39) USS BOXER (LHD 4) Duty 6 Section Engineering Duty Section Inport Watchbill
(40) RADM PQS Qualifications for 43241 3M Maintenance Person of 14 Jul 23
(41) RADM PQS Qualifications for 43523-C QA Craftsman of 14 Jul 23
(42) RADM PQS Qualifications for 43708 Space Supervisor of 18 Jul 23
(43) RADM PQS Qualifications for 43708 Cold Iron Watch of 18 Jul 23
(44) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(45) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(46) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(47) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(48) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(49) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(50) RADM PQS Qualifications ICO (b) (6) of 14 Jul 23
(51) RADM PQS Qualification ICO (b) (6) of 14 Jul 23
(52) (b) (6) Cold Iron Watch PQS Book
(53) Component Procedure, Lube Oil Pump, Motor-Driven (LOPM/0457/062510)
(54) USS BOXER (LHD 4), Commanding Officer's Standing Orders, 2 Nov 2022
(55) EDO Turnover Sheet Template
(56) EDO Turnover Sheet of 10 Jul 23
(57) EDO Turnover Sheet of 12 Jul 23
(58) USS BOXER (LHD 4), Bell Book, 11-12 Jul 23
(59) USS BOXER (LHD 4), Lube Oil Logs, 11-12 Jul 23
(60) USS BOXER (LHD 4), NR2 Main Engine Bearing Temp Log of 11 Jul 23
(61) USS BOXER (LHD 4), NR2 Main Engine Logs
(62) USS BOXER (LHD 4), FWD MMR Cold Iron Logs, 11-12 Jul 23

Subj: COMMAND INVESTIGATION INTO THE MAIN REDUCTION GEAR CASUALTY THAT OCCURRED ONBOARD USS BOXER (LHD 4) ON 11 JULY 2023

(63) USS BOXER (LHD 4), Master Light-Off/Pre-Light-Off Checklist (MLOCs)
(64) USS BOXER (LHD 4), Light-Off Orders, 13 & 14 Jul 23
(65) USS BOXER (LHD 4), Ship's Deck Logs, 11-13 Jul 23
(66) Acting Letter ICO CAPT Brian Holmes of 7 Jul 23
(67) MRC 48 B5JU N (R-1), Test Main Lube Oil Pump Logic Sequence, Apr 18
(68) EOSS Diagram for Main Engine Lubricating Oil System, (DLO/0375/111118)
(69) Component Procedure, Lube Oil Strainer (Duplex), (LODS/0640/122011)
(70) TORS 21808 – 11 Jul 23, Main Engine NR2, Measure Turbine Bearing Wear
(71) TORS 21808 – 12 Jul 23, Main Engine NR2, Measure Turbine Bearing Wear
(72) USS BOXER (LHD 4), Journal Bearing Log, 12 Jul 23
(73) CAPT Chieslukowsk email to (b) (6) , of 12 Jul 23 (5W email)
(74) TORS 21808 – 13 Jul 23, Main Engine NR2, Inspect MRG and Spray Nozzles
(75) SWRMC TAVR USS BOXER (LHD 4) NR 2 MRG Inspection of 13 Jul 23
(76) SKED PMS Accomplished for EM01/EM02 week of 9 Jul 23
(77) Photo of FWD MMR LOSPs
(78) Photo of FWD MMR LOSP Control Panel
(79) Photo of EOS LOSP Operating Panel
(80) Photo of EOS Throttle Panel and Shaft Counter
(81) Photo of FWD MMR Turning Gear Handle
(82) Photo of FWD MMR Turning Gear Assembly
(83) Photo of FWD MMR HP Turbine First Reduction Gear
(84) Photo of FWD MMR Main Lube Oil Low Pressure Alarm (Audible)

Preliminary Statement

1. In accordance with enclosure (1), I was appointed by Expeditionary Strike Group THREE (ESG3) to investigate the facts and circumstances surrounding the Main Reduction Gear (MRG) casualty onboard USS BOXER (LHD 4) on 11 July 2023 (herein after 'BOX'). This report specifically addresses the events and causal factors that led to the operation of NR2 MRG turning gears without the lube oil (LO) system aligned in Forward (FWD) Main Machinery Room (MMR), and subsequent actions or inactions by BOX personnel upon discovery of those conditions. It also provides observations of the culture of BOX Engineering Department as it relates to the potential for future mishaps. Contained herein is a listing of the findings of fact (FoF), opinions rendered, and recommendations for remedial and administrative action in accordance with reference (a). One extension was requested and granted per enclosure (2).

2. All relevant evidence was collected. That evidence contains a myriad of acronyms which have been included in enclosure (3). On 17 July 2023, the investigation team conducted a walk-through of BOX to assess material condition and cleanliness of the Engineering Plant, and to provide the command investigating officer (CIO) familiarization with the location and operation of relevant equipment.

3. Interviews of key personnel were conducted onboard BOX on 19, 20 and 21 July 2023. For these interviews the investigation team recorded the discussion with permission from the

interview subject, and retained an audio file. Transcripts were created from these recordings, which can be found in enclosures (4) through (16).

4. (b) (6), USN, who serves at CNSP, Amphibious Readiness Directorate (N46), was assigned to provide subject matter expertise with respect to equipment familiarization and engineering steam plant operations in the completion of this investigation. (b) (6) was specifically identified for this role based on (b) (6) prior service as (b) (6), USS ESSEX (LHD 2) from 2018 to 2022.

5. (b) (6), USN, and (b) (6), assigned to ESG3, provided legal advice and administrative support throughout the investigation.

6. "Turning gear" and "jacking gear" are used interchangeably in references and enclosures. For consistency, use of the term "turning gear" will be used throughout this report except when citing content of enclosures verbatim.

7. On 13 July 2023, BOX produced a critique of the subject event as required by reference (b). This document was provided to the CIO concurrently with enclosure (1). A revised version of this critique was provided on 21 July 2023 by the Commanding Officer. These critiques were considered in the review of evidence, however, they did not shape or alter the investigation strategy. The initial and subsequent versions of this critique are represented by enclosure (17) and (18), respectively.

8. The Chief Engineer, (b) (6), elected to invoke his 31b rights and not answer a portion of questions in his interview. This did not prevent the CIO from determining findings of fact, but has limited the ability to assess the performance of the Main Propulsion Assistant (MPA).

9. A series of photographs were taken to provide a visual representation of the equipment in question. These photographs are provided as the final enclosures so they remain in sequence.

Findings of Fact

Background: This section provides leveling information as to the specifications and required operation of the WASP Class Main Reduction Gear and associated Turning Gear installed on BOX in accordance with references (c), (d) and (e).

1. BOX has one set of reduction gears per shaft that transmit 35,000 maximum continuous shaft horsepower generated by the turbines to the propeller shafts rated at 180 RPM through a double input (Low Power and High Power), double reduction (first and second stage), articulated type. Within each shaft's MRG, there are first reduction gears consisting of a Low Power Turbine gear and a High Power Turbine gear, followed by a second reduction or bull gear which is coupled to the propulsion shaft. [Ref (c)]

2. Each shaft's MRG has a motor-driven turning gear, which is mounted on the High Power reduction gear upper housing in the MMR Upper Level. The assembly consists of a drive motor

and a worm gear double reduction speed reducer engaged and disengaged by operation of a handle and clutch shaft. The clutch mechanism moves axially to engage or disengage the internal gear teeth with the splines on the after end of the High Power, first reduction pinion shaft. [Ref (c)]

3. The turning gear is used during warmup and shutdown of the propulsion shaft and MRG to equalize heating and cooling rates of the turbine cylinders and rotors. When engaged, the turning gear drives rotation of the reduction gear and propeller shaft at approximately 0.1 RPM, or one turn every 10 minutes. The turning gear is also used to lock the propeller shaft. [Ref (c)]

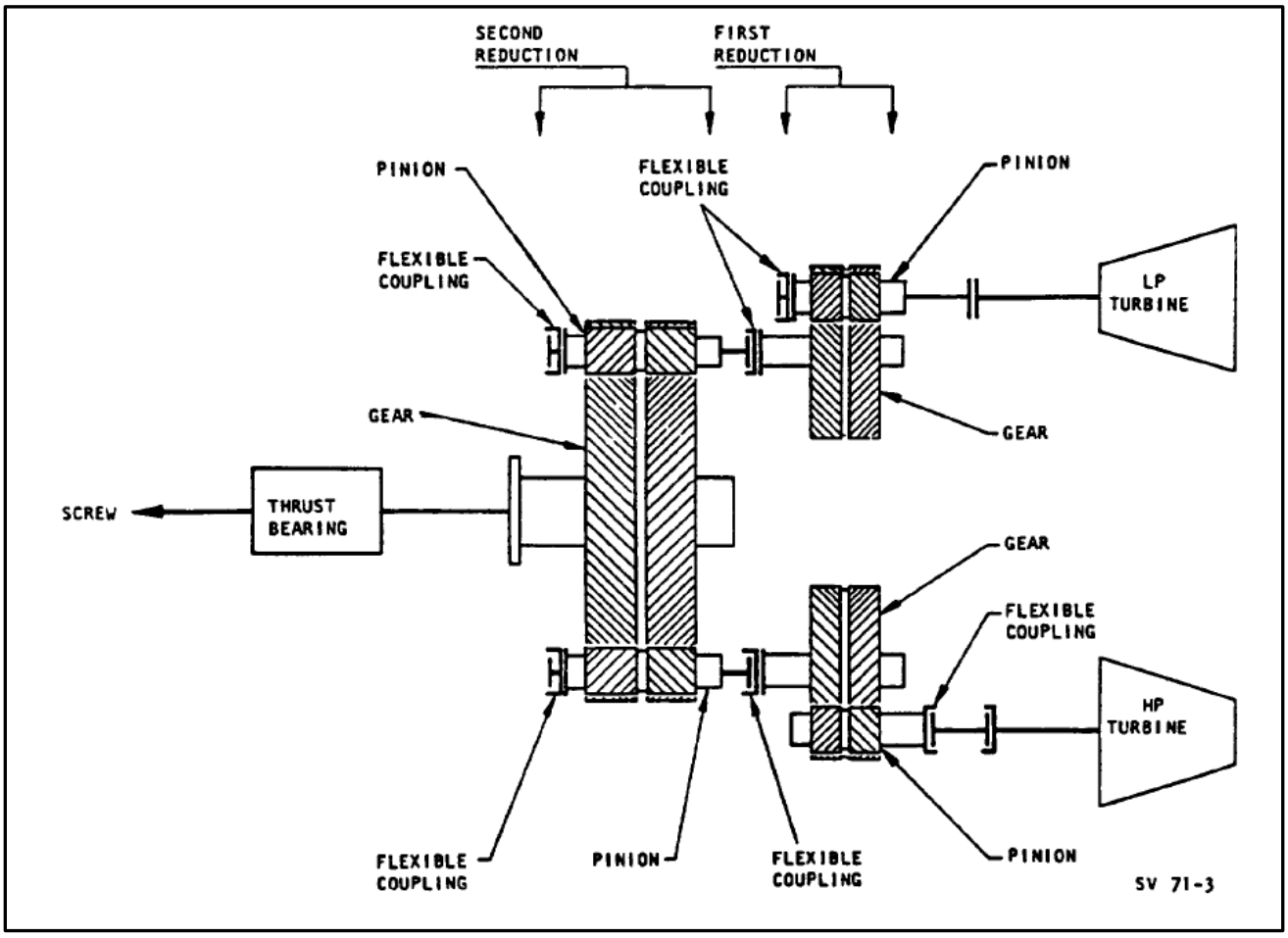

Figure 1 – WASP Class MRG Assembly

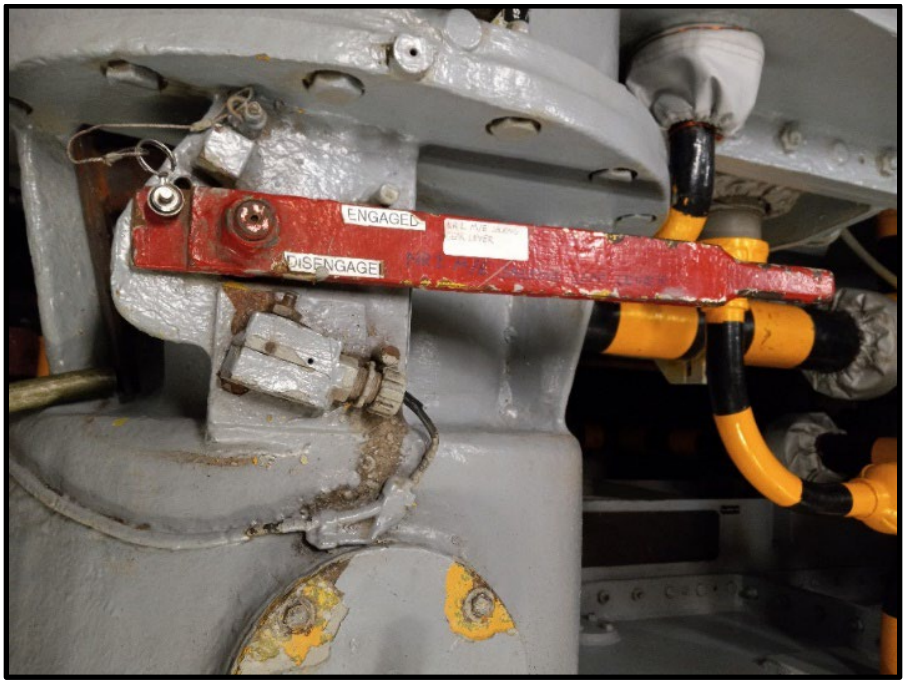

Figure 2 – FWD MMR MRG Turning Gear Handle

4. Turning gears shall be operated in accordance with approved on-board procedures. That Component Procedure on BOX is found in enclosure (19). However, the general NSTM guidelines to observe when operating the turning gear include:

a. All MRG bearings and turning gear elements should be supplied with lube oil (LO) prior to rotation. If these components are not supplied with an adequate supply of LO, damage caused by overheating could occur. [Ref (d)]

b. When MRG rotation without the LO system operating is required, rotation should be limited to 1 and 1/4 revolutions of the gear. An additional 1 and 1/4 revolution of the gear is allowable following a one hour cool down period between cycles if the turning gear elements are not experiencing excessive wear. [Refs (d) and (e)]

c. Prior to rotating without LO, all MRG bearings and turning gear elements should be lubricated. MRG bearings can be lubricated through the sight flow indicators and turning gear elements, requiring forced lubrication, can be lubricated through inspection covers. [Ref (d)]

d. MRG dehumidifier shall not be operating when the LO system is operating. [Ref (d)]

5. After shutting down propulsion engines, operators shall continue LO circulation and rotate the MRG on turning gear while circulating cooling water and operating the purifier or filter separators. After not less than 12 hours, operators shall shut down the cooling water and purifier but continue circulating LO until the temperature of the LO is stable within 10degF of engine room ambient temperature. This will minimize condensation which causes rusting. The turning

gear can be secured any time after the initial 12 hours provided LO temperature is within 10degF of ambient temperature, and prior to LO pumps being secured. [Refs (d) and (e)]

6. BOX is fitted with two lube oil service pumps (LOSPs) per MRG. The Main LO pumping units consist of a pump and an alternating current motor driver which are flexibly coupled. The pump is a positive displacement, vertically mounted screw pump. The two LOSPs in FWD MMR are labelled 2A and 2B LOSP. [Ref (f)]

Figure 3 – FWD MMR Main LOSP 2A & 2B

Relevant Ship History

7. BOX is in her 28th year of service, having been commissioned in February 1995. [Encls (4) and (5)].

8. BOX's last deployment culminated on November 27, 2019, and the ship commenced a CNO Maintenance Availability in June 2020, which concluded in June of 2022 with KTR Sea Trials. The CNO Maintenance Availability was extended for approximately 6 months from the original end date. [Encls (4) and (5)]

9. The ship's most recent underway period was in June 2022 for approximately 7 days concurrent with KTR Sea Trials. [Encls (4), (5) and (6)]

10. Several previous attempts have been made in late 2022 and 2023 to complete master light off checklists (MLOCs), and get underway in support of the Basic Phase of Training. In each of these cases, Engineering casualties or inoperable Engineering equipment prevented the ship from taking to sea. [Encls (4) and (5)].

Leadership

11. CAPT Matthew Chieslukowski serves as the Commanding Officer. He relieved (b) (6) (b) (6) on 4 August 2022. CAPT Cieslukowski was commissioned in 1998 as a Surface Warfare Officer. He previously had command of USS STERETT as part of an XO/CO Fleet Up from 2014 to 2017. His previous shipboard tours include USS CUSHING (DD 985), USS JARRETT (FFG 33), and USS MOBILE BAY (CG 53). He attended all core Major Command pipeline training. This pipeline did not include any steam plant-specific training for arrival to BOX. He spent time underway in BOX as XO in June 2022, but has not yet been underway on BOX while in command. [Encls (4) and (20)]

12. CAPT Brian Holmes serves as the Executive Officer. He relieved CAPT Chieslukowski in August 2022. CAPT Holmes was commissioned in August 1998 as a Naval Aviator. He previously had command of HSM-71 as part of XO/CO Fleet Up from 2015 to 2017 and deployed on USS JOHN C. STENNIS (CVN 74). Previous sea assignments include HSL-45 deploying on USS INGRAHAM (FFG 61), USS OLDENDORF (DD 972) and USS RENTZ (FFG 46), and HSM-71 where he served as the squadron's Maintenance Officer deploying on USS JOHN C. STENNIS (CVN 74). He attended all core Major Command pipeline training. This pipeline did include steam plant-specific training at SWSC for a period of 3 days, as part of the Surface Commander's Course. He has not yet been underway on BOX as Executive Officer. [Encls (5) and (21)]

13. CMDCM Jose Ramiro-Guzman reported onboard BOX on 22 February 2023. He enlisted in the Navy in 1996 as an Airman Recruit. His previous shipboard tours include USS DWIGHT D. EISENHOWER (CVN 69), USS DOYLE (FFG 39), and USS MCINERNEY (FFG 8). His initial Command Senior Chief tour was on USS BILLINGS (LCS 15) and USS DETRIOT (LCS 7). Following his selection to Master Chief Petty Officer in 2017, he served as the Command Master Chief aboard USS MICHAEL MURPHY (DDG 112) and Commander Destroyer Squadron ONE embarked onboard USS CARL VINSON (CVN 70). He has attended all required Command Master Chief pipeline training. He has not been underway on BOX as CMDCM. [Encls (7) and (22)]

14. (b) (6) held the position of (b) (6) until (b) (6) scheduled transfer on 21 July 23. (b) (6) reported onboard BOX on 20 July 2021. (b) (6) was a (b) (6) (b) (6) in (b) (6) (b) (6) was (b) (6) as an (b) (6) (b) (6) previous commissioned shipboard tours include (steam plant denoted by *) USS TAYLOR (FFG 50) as Main Propulsion Assistant, USS BATAAN (LHD 5)* as Repair Officer/Ship's Maintenance Officer, USS RUSHMORE (LSD 47) as (b) (6) (b) (6) qualified as a Steam Engineering Officer of the Watch (EOOW) in (b) (6) (b) (6) also served as an (b) (6)

from 2015-2017. [redacted] received Advanced Steam Engineering (A-4H-0157) training at SWSC enroute to BOX. [redacted] qualified as [redacted] and qualified as [redacted] had been underway on [redacted] for a period of approximately 7 days during [redacted] [Encl (6)]

15. [redacted] holds the [redacted] reported onboard BOX in [redacted] was a [redacted] USS KEARSARGE (LHD 3), and USS BLUE RIDGE (LCC 19). [redacted] had no commissioned experience on a steam plant ship prior to BOX. [redacted] previous commissioned shipboard tours include USS STOCKDALE (DDG 106) as MPA, USS GUNSTON HALL (LSD 44) as MPA, and USS MONSOON (PC 4) as [redacted] qualified as [redacted] also served as an Assessor at INSURV from 2020-2022. [redacted] had been underway on BOX as MPA for a period of approximately [redacted] [Encl (8)]

16. The position of Boilers Officer (BO) is vacant and has been for ~6 months. [redacted] reported to BOX on 24 July 2023. [Encls (4) and (5)]

17. The position of Engineering Department Leading Chief Petty Officer, or "Top Snipe", has been unfilled since early June 2023 due to impending administrative action ICO [redacted]. [Encls (4), (5) and (7)]

18. The position of Main Propulsion Division Leading Chief Petty Officer is split between the forward and aft plants. The FWD MMR position is held by [redacted]. [redacted] reported onboard BOX in 2019. [redacted] is [redacted] has significant underway time in BOX including the 2019 deployment. [Encls (4), (5), (7) and (9)]

19. The position of FWD MMR Leading Petty Officer is held by [redacted] reported onboard BOX in August 2022. [redacted] is qualified EDO. [redacted] has not been underway in BOX. [Encl (10)]

20. BOX received results from the Change of Command DEOCS Survey in Dec 2022. That survey and the follow-on focus groups revealed undertones of unprofessional and toxic leadership, isolated primarily to [redacted] and [redacted]. [Encls (4), (5) and (7)]

21. It is a matter or record that [redacted] has been formally counseled by Engineering Department leadership as many as six times. [Encls (4), (5) and (7)]

Training

22. Between 24 January 2022 and 5 May 2023, Afloat Training Group (ATG) and Engineering Assessments Pacific (EAP) conducted no fewer than 12 training, assist or assessment visits to BOX. Those events included preparations for light off assessment (LOA) and mobility engineering (MOB-E) Basic Phase. End of Mission Reports (EOMR) provided the results of

those visits per enclosures (23) through (34). Key observations noted throughout those EOMRs include:

a. 24-28 Jan 22 (M-1), Senior Assessor's Comments cited that "I cannot emphasize enough the importance of developing a culture of safety and strict adherence to approved, written procedures. The Engineering TRIAD needs to have a clear understanding of the material condition throughout the plant and its impact on safety and operation in order to provide accurate reports and recommendations to the Commanding Officer. I strongly recommend that the Division Officers and Chiefs properly and accurately scrub the 8 O'Clock report, Temporary Standing Orders (TSO), Safety and Relief Settings List, etc." [Encl (23)]

b. 7-9 Feb 22 (M-2), "Engineering 8 O'Clock Reports and TSOs need to be thoroughly reviewed and reflect current equipment status. Lack of knowledge of watch standers in respect to TSO and proper use of engineering operational sequencing system (EOSS) procedure. EOSS is not in accordance with engineering users guide (EUG)." [Encl (24)]

c. 25 May - 1 Jun 22 (M2RR), cited "alarms [found] in "CUTOUT"; recommend affixing appropriate labels if IAW EOSS. Ship's Force has EOSS in place, but is not fostering a culture of using procedures during plant operation." [Encl (25)]

d. 8 - 17 Jun 22 (M2RRR), cited "S/F has EOSS in place but is not fostering a culture of using procedures during plant operation." [Encl (26)]

e. 30 Jun - 1 Jul 22 (T/C-1), cited "conducted two sets of evolutions and drills walk-through/talk-through with section 1, 2, and engineering training team (ETT). Ship's Force took onboard our recommendation to re-evaluate ETT members to include Senior Engineering leadership." [Encl (27)]

f. 18 - 22 Jul 22 (LTT), cited that "during day 5 drills, EAP found main engine [turning gear] still engaged from ships force jacking port shaft over the day before. EOSS states to disengage [turning gear] when securing from jacking the shaft over." [Encl (28)]

g. 27 Feb - 3 Mar 23 (A-1/A-2), listed significant comments to include, "Lube Oil Quality Management (LOQM), Fuel Oil Quality Management (FOQM), Operating Logs, and Legal Records assessed as not trending ready to support light-off due to ship's force inability to identify UNSAT/out of parameter readings and take proper corrective actions." Additionally, the report recommended additional training on proper log keeping and review, to conduct training to improve watchstander level of knowledge, and to continue evolutions and drills to ensure smooth execution of future events. [Encl (31)]

h. 11 – 22 Apr 23 (M-2.1 and M-2.2) cited, "Temporary Standing Orders need to be thoroughly reviewed for administrative consistencies and plant control management." [Encls (33) and (34)]

i. 24 Apr – 5 May 23 (M-2.2), EAP recommended BOX continue to conduct in-house training for evolutions and drills. [Encl (34)]

23. The Engineering Training Team designation letter reflects the Chief Engineer and MPA as ETT Leaders. [Encl (35)]

24. The Engineering Training Team does not include (b) (6), despite him being the longest tenured CPO in BOX Engineering Department (4 years). [Encl (35)]

25. The CIO requested that BOX provide a copy of training records for ETT and a past and present training syllabus. Those documents do not exist, or at best, have not been maintained as a matter of record. [Encl (35)]

26. A formal set of ETT-led evolutions has not been conducted since 5 May 2023. MPA is the primary action officer responsible to the Chief Engineer for ETT. [Encls (5), (6), (8) and (10)]

Log Keeping

27. The MPA is responsible for the preparation and care of all logs, specifically the Engineering Log. (b) (6) must inspect the logs daily and more often when necessary, to ensure they are kept properly. [Refs (g) and (h)].

28. The Chief Engineer's Standing Order #12 requires Engineering Log entries to be made as events occur. It cites that a series of log entries made at the end of a hectic or eventful watch will not accurately depict the complete series and conduct of evolutions and events. [Encl (36)]

29. There are a total of 49 late entries throughout the Engineering Log during the period of 10 - 13 July 2023. [Encl (37)]

30. The Engineering Log, which serves as a legal document, was maintained with marginally readable handwriting from 10 – 13 Jul 22. [Encl (37)]

31. The MPA indicated that (b) (6) reviews logs at the end of the day, and is frequently burdened with tracking watchstanders down to address out of parameter readings. [Encl (8)]

Qualifications

32. This investigation revealed that all Duty Section personnel on watch on 11 July 2023, as well as maintenance personnel who performed plant operations from 10 – 13 July 23 were qualified and certified to perform the watches or maintenance actions as noted throughout this report. [Encls (38), (39), (40), (41), (42), (43), (44), (45), (46), (47), (48), (49), (50) and (51)]

33. Prior to 11 July 2023, 2 of 6 Inport Duty Sections contained an E6 as the primary EDO watch stander. [Encls (6), (10), (11) and (38)]

34. (b) (6) RADM record cites EOOW, but no EDO qualification. It is presumed that (b) (6) has stood EDO on several prior ships, and should have been granted a qualification on BOX. The absence of this qualification on BOX is an administrative oversight, but one that calls into question (b) (6) authority to chair EDO boards and recommend EDO qualifications to the Chief Engineer. [Encl (44)]

35. (b) (6), the Auxiliaries Division Leading Chief Petty Officer, is not qualified EDO, and did not pass a knowledge validation with the Chief Engineer after having passed an oral board in May 2023. This required First Class Petty Officer's to fill EDO positions that would otherwise have been covered by (b) (6). [Encls (6) and (8)]

36. (b) (6) is not qualified EDO due to (b) (6) limited time onboard. (b) (6) is trending toward on-time qualification. (b) (6) is the projected EDO for duty section 5. [Encls (6), (8) and (45)]

37. The Duty Section 5 EDO was (b) (6) who was qualified on 2 June 2023. (b) (6) was standing (b) (6) third qualified EDO watch in BOX on 11 July 23. (b) (6) was also qualified EDO in Duty Section 5, however, (b) (6) role in the duty section was as Oil King. [Encls (11), (37), (38) and (47)]

38. The Chief Engineer had previously been satisfied with first class petty officers (FCPOs) standing EDO. This included (b) (6) and (b) (6). [Encl (6)]

39. (b) (6) EDO oral board was chaired by the previous Top Snipe. (b) (6) had made significant progress toward qualifying as EDO on (b) (6) previous ship, the Chief Engineer accepted that progress upon arrival to BOX in Apr 2023. No commissioned Officer sat (b) (6) EDO oral board. (b) (6) was onboard for 2 months when (b) (6) qualified as EDO. [Encls (6), (11) and (47)]

40. In response to the subject event, the Chief Engineer removed FCPOs from the EDO watchbill, requiring that only qualified CPOs stand EDO. This required a shift to 4 section Inport Duty for the EDOs on 13 July 2023. That group included (b) (6) and (b) (6). No pre-existing E6 qualification was held in abeyance for remediation during the period leading to 20 July 2023. [Encl (4)]

41. The Chief Engineer does not serve as Chairman of EDO oral boards. (b) (6) delegates authority to MPA and CPOs. If they pass the oral board, (b) (6) conducts a validation that the individual has requisite knowledge to serve as an EDO. The CO was unaware that this was the standard practice. [Encls (4) and (6)]

42. The Chief Engineer has held up one recommended qualification for (b) (6) under this EDO qualification process. [Encl (6)]

43. (b) (6) indicated that (b) (6) completed the MMR Cold Iron Watch qualification while the ship was in maintenance phase when very little equipment was available to operate. (b) (6) met the

PQS requirement of standing four watches under qualified supervision on 25, 26, 27 and 29 June 2021. [Encls (12) and (52)]

44. (b) (6) was qualified as MMR Lower Level on 31 May 2023, having passed an oral board chaired by (b) (6). (b) (6) claims to have never operated LOSPs and is not familiar with LOPM. The PQS book for MMR Lower Level requires personnel to conduct two evolutions of align, operate and secure Main LO System; two evolutions to start, operate and stop Main LO Pumps; and stand 5 watches under qualified supervision. [Ref (i); Encls (12), (52), (53)]

Commander's Intent, Processes and Governing Documents

45. Per the U.S. Navy SORM, The executive officer is the direct representative of the commanding officer and shall be primarily responsible for the organization, performance of duty, training, maintenance, and good order and discipline of the entire command. [Ref (g)]

46. Per the U.S. Navy SORM, the Chief Engineer shall personally inspect boilers, main engine, and generator reduction gears, the main and auxiliary condensers, main engine LO sumps, and the main engine internals before closure to ensure proper reassembly. The results of these inspections shall be reported to the CO and entered in the engineering log. [Ref (g)]

47. CO's Standing Orders do not explicitly address the requirement to seek permission or make notification to engage or disengage the turning gear for the purpose of rotating the shaft. It does address requirements for rolling of shafts, which leaves room for assumption that this only applies to when the propulsion engine is driving that shaft. [Encl (54)]

48. CO's Standing Orders do not require the EDO to read and acknowledge those orders through a monthly review sheet. This list is inclusive of all unrestricted line Officers, underway controlling stations, CDOs and the Combat Systems Officer of the Watch (CSOOW). The EDO is conspicuously omitted. Additionally, *Standing Order #1: Responsibility* directs that positions of special trust shall not abdicate their responsibility. The EDO is similarly omitted from this list of key personnel. [Encl (54)]

49. CO's Standing Order #1 does not provide guidance for watch relationships for the EDO. [Encl (54)]

50. CO's *Standing Order #2: The Watch* highlights the Commander's Philosophy for use of Sound Shipboard Operating Principles. [Ref (j); Encl (54)]

51. CO's Standing Order #2 requires Controlling Station Supervisors to ensure watch teams are rested and ready to perform, must ensure a complete exchange of information to include Engineering Plant Alignment, and to incorporate the Plan, Brief, Execute, Debrief process into day-to-day watchstanding. [Encl (54)]

52. CO's *Standing Order #4: Required Reports to the Commanding Officer* includes but is not limited to all occurrences that are believed to require his attention, all capability impacting

material casualties and corrective action, and the inability to complete check-off lists. It does not include a requirement to notify the CO when a turning gear is engaged and rotating. [Encl (54)]

53. CO's *Standing Order #5: Commanding Officer Approval Items* requires that he be notified of the bypassing of any alarms (such as placing alarms in "cutout" mode). The signed version of the Chief Engineer's *Standing Orders #4: Items Requiring CO Permission and Engineering Officer Notification* cites that permission is required to place any alarm or safety device in "cutout" **except for PMS** in direct conflict with the CO's guidance. The procedure for stopping lube oil (LO) pumps in LOPM requires that the local alarm in FWD MMR be placed in "cutout"; there is no supplemental guidance on seeking CO permission within this EOP. [Encls (36), (53), (54) and (84)]

54. In CO's Standing Order #5, the required permissions section for Engineering includes, but is not limited to, the rolling or stopping of shafts and to open reduction gears. It does not specify that the rolling or stopping of shafts include the turning gear engagement/disengagement. Additionally, the Chief Engineer's Standing Orders does not explicitly address a requirement to seek permission or make notification to engage or disengage the turning gear. [Encls (36) and (54)].

55. Chief Engineer's Standing Orders are embedded as enclosures within the Engineering Department Organization and Regulations Manual (EDORM). [Encl (36)]

56. The BOX EDORM was signed most recently as a Change Transmittal on 27 January 2020 and was promulgated by a previous Commanding Officer and Chief Engineer. A working draft has been in circulation for several months but has not been signed and formally issued. [Encls (6), (8), (9), (10), (11), (12), (13), (14), (15) and (16)]

57. The Chief Engineer's *Standing Order #2: Plant Operation* requires that all orders to start and stop equipment, make system line-up changes, or conduct any evolution will be ordered by, or done with the permission of the EOOW. It does not list the EDO in this section as having similar authority over the duty section. [Encl (36)]

58. The Chief Engineer's *Standing Order #5: Watchstanding* requires that all department watchbills will be submitted to (b) (6) for approval. A signed watchbill for 11 July 2023 could not be furnished as part of this investigation. [Encl (36)]

59. The Chief Engineer's *Standing Order #7: EDO Responsibilities* include, but are not limited to, the need to immediately notify the CDO and the CHENG of any abnormal situation, maintain the engineering log for the period of duty, to supervise the performance of MLOCs prior to plant light-off, and to ensure all directives promulgated through light-off orders are adhered to. [Encl (36)]

60. The Chief Engineer's Standing Order #7 requires that a formal walkthrough of the spaces shall be conducted with both the on-coming and off-going EDO. Turnover should include, but is

not limited to, the review of operating machinery status, MLOCs/Light-off orders in effect and other unusual conditions. [Encls (36) and (55)]

61. The Chief Engineer's *Standing Order #11: Operating Logs and Record Keeping* requires that the Auxiliary Officer (AUXO) and MPA will submit operating logs to the CHENG daily. [Encl (36)]

62. The Chief Engineer requires the department to review the EDORM quarterly and prior to Light Off. If there is a record sheet where this accountability is logged, the vast majority of personnel interviewed are unaware such a record exists, and have not signed for their review. The EDORM requires supervisory personnel to be familiar with its contents, but does not address frequency for review or the means to account for that review. [Encls (6), (8), (9), (10), (11), (12), (13), (14), (15), (16) and (36)]

63. The Chief Engineer's Standing Order #12 requires the EDO to maintain the Engineering Log in the Log Room. It is current practice for the EDO to stand the watch in the Tech Library to facilitate access to E-Tagout software. [Encls (6), (8), (9), (10), (11), (12), (13), (14), (15), (16) and (36)]

64. The Chief Engineer participated in the EDO turnover on 11 July 2023, and addressed with the on-coming and off-going EDO that the turning gear was engaged and was jacking the shaft [Encl (6)]

65. An EDO Turnover Sheet exists to facilitate turnover. It does not list the turning gear as a major piece of equipment, however, the Engineering Log daily cover sheet does. [Encls (8), (37), (55), (56) and (57)]

66. There is no record of an EDO Turnover Sheet having been filled out during turnover on 11 July 2023. That turnover occurred between (b) (6) and (b) (6). [Encls (6) and (11)]

67. (b) (6) was removed from the CDO watchbill as Duty Section 4 of 6 in December 2022, to support KTR oversight of Force Draft Blower repairs. This decision was made under the Commanding Officer and Executive Officer purview, in response to (b) (6) request. The requirement to monitor the KTR was borne out of repeated failures to execute these repairs with precision, resulting in consecutive Engineering Readiness Assist Visits (ERAVs). (b) (6) the Steam Generating Plant Inspector (SGPI) who is also a qualified EDO, was also removed from the inport watchbill to facilitate KTR oversight. [Encls (4), (5) and (6)]

68. Because the Cold Iron Watch is required to conduct rounds, BOX Engineering personnel have employed a practice of writing on the white board in EOS to document the alignment, starting and stopping of equipment that must be logged in Operating Logs. These entries are made retroactively by the Cold Iron Watch. [Encls (9), (10), (11), (12), (13), (14), (15) and (16)]

Plant Status

69. On 11 July 2023, BOX had transitioned from Auxiliary Steaming configuration to Cold Iron following a light-off of the FWD propulsion boiler. Upon securing from that test on 10 July 2023, the Cold Iron Watch was maintaining logs routinely held by the MMR Upper and Lower Level Auxiliary Steaming watch because the turning gear remained in operation. Cold Iron MLOCs were in progress at the 72-hr prior mark on 11 July 2023 to support a 14 July 2023 underway. [Encls (12), (37), (58), (59), (60), (61), (62), (63) and (64)]

70. While at Cold Iron, a qualified EOOW is not required for Steam propulsion ships as long as a qualified EDO is on station. An EOOW is required before lighting off any propulsion boiler for Auxiliary Steaming. At the time of the subject event, an EOOW was not required and the EDO was responsible for plant control. [Ref (h); Encls (3), (4), (64)]

71. On 11 July 2023, BOX was in 6 section Inport Duty with Section 5 on deck. BOX engineers transition to 3 section Inport Duty when Auxiliary Steaming, which includes portions of the watchbill that collapse to Port and Starboard when the boiler is in operation. [Encls (4), (5), (6), (8), (36) and (38)]

Timeline of Events (From 0859 10JUL23 through 1200 11JUL23)

72. On 10 July 2023 at 0859, 2A LOSP was started IAW LOPM. [Encls (37) and (53)]

73. At 0904, BOX transitioned from Cold Iron to Auxiliary Steaming. EOOW position was stood up. [Encl (37)]

74. At 0944, NR2 Main Engine Turning Gear was engaged and rotating the shaft. The CDO was not notified. Component Procedure MEJG requires that a sign stating "MAIN ENGINE JACKING GEAR ENGAGED" is placed on the throttle station in the Engine Operating Station (EOS) (step 2), but no such placard is required to be placed on the LOSP control panel. [Encls (19) and (37)]

75. At 1044, fires were lit for NR2 Boiler test. [Encl (37)]

76. At 2304, fires were extinguished for NR2 Boiler. Minimum 12-hr shaft rotation with turning gear engaged commenced. [Refs (d) and (e); Encls (19) and (37)]

77. At 2346, BOX transitioned to Cold Iron Watch. EOOW was watch stood down. EDO was assumed by (b) (6) . [Encl (37)]

78. On 11 July 2023 at 0000, the Deck Log midnight log entry cites that the ship is Cold Iron with no reference to the shaft being rotated by the turning gear. The CO was ashore. There is no deck log entry throughout the day citing the arrival or departure of the CO, as he was conducting a PCS pack out for his dependents. XO was furnished with an acting letter. [Encls (65) and (66)]

79. At 0645, (b) (6) assumed the watch as FWD Cold Iron. [Encls (12) and (62)]

a. (b) (6) has not stood the watch in several months following (b) (6) August 2021 qualification, and has never stood Cold Iron while transitioning to or from Auxiliary Steaming. [Encls (12), (50) and (52)]

b. (b) (6) is asked to maintain Bell Book, MRG Temperature and Main Engine LO Logs by virtue of the turning gear remaining engaged. (b) (6) had never taken these readings previously during a qualified watch, but did not notify the EDO of this concern. [Encls (11), (12), (58), (59), (60), (61) and (62)]

c. (b) (6) routinely stands Sounding & Security watch as part of duty section 5 of 6. [Encls (12), (38) and (39)]

d. (b) (6) was not made aware prior to the start of the duty day that (b) (6) would be assigned MMR Cold Iron as a replacement for (b) (6) who had been shifted to food service attendant (FSA) duty. [Encl (12)]

80. At approximately 0630, (b) (6) and (b) (6) did not conduct a space walkthrough together as required leading up to turnover. [Encls (11) and (36)]

81. At 0650, EDO turnover was complete; EDO was assumed by (b) (6). The watch was turned over without (b) (6) conducting a thorough review of plant status, specifically that NR2 Main Engine turning gear was engaged and rotating the shaft. [Encls (11) and (37)]

82. This was (b) (6) third qualified watch as EDO, and first when MLOCs were in progress. [Encl (11)]

83. At 0730, Quarters was held for Main Propulsion Division. MLOCs were tasked verbally without specifically identifying which maintenance person was to perform each check. This guidance was delegated from (b) (6) to (b) (6), then further to the Second Class Petty Officer level. [Encls (9), (10), (13) and (14)]

84. At 0930, LO Sequencing check commenced in FWD Plant without requesting permission from the EDO. 2A LOSP was already aligned and running in support of turning gear operation. [Encls (9), (11), (13), (14), (67) and (68)]

a. This maintenance was performed under the supervision of (b) (6) who was monitoring from EOS. [Encls (9), (13), (14) and (67)]

b. (b) (6) assisted in the maintenance by bleeding off pressure from the LO logic Tree. [Encls (13), (14) and (67)]

c. (b) (6) was positioned at the LOSPs and operating 2A and 2B throughout the logic check. (b) (6) had performed this check not less than 7 times previously, but in no prior instance was the LOSP running at the start of the check. [Encls (14) and (67)]

d. No entries were made in the Engineering log to document the shifting of 2A and 2B LOSPs, or that this MLOC check was performed. [Encls (9), (10), (11), (14), (37), (63) and (67)]

85. At approximately 0955, (b) (6) and (b) (6) departed FWD MMR to conduct a counseling session. Interviews with (b) (6) and (b) (6) suggest (b) (6) departed the space while LO Sequencing checks were nearing completion, but (b) (6) did not see through the entirety of the check, and did not report completion as the senior maintenance person involved. [Encls (9), (10) and (67)]

86. At approximately 1000, FWD Plant LO sequencing check is completed, but not reported to the EDO. No such entry was made in the Engineering Log. The estimated time of completion listed here could not be determined through personnel interviews, but is informed by the PMS card which states 0.5 hours of maintenance. (b) (6) left 2A LOSP running upon completion of the check with the intent to perform shift, inspect, clean, lube oil strainers (SICLOS). [Encls (9), (10), (11), (13), (14), (37), (67), (68) and (69)]

87. At approximately 1001, (b) (6) commenced FWD plant SICLOS without requesting permission from the EDO. [Encls (11) and (14)]

a. (b) (6) is trained and qualified to perform SICLOS by virtue of being MMR Lower Level qualified. [Encls (14) and (51)]

b. Maintenance commenced without the presence of a qualified Space Supervisor. Specifically, the SICLOS portion of LODS (step 28-31) requires a Space Supervisor to inspect the strainer basket chamber for foreign objects and debris and observe reassembly of the strainer subassembly. [Encls (10), (14), (15), (63) and (69)]

88. At approximately 1030, (b) (6) requested the assistance of (b) (6) to inspect the LO basket strainer in FWD MMR. (b) (6) was passing through the space without having been assigned SICLOS. (b) (6) is qualified to perform this inspection. [Encls (14), (15) and (42)]

89. Between 1030 and 1230, (b) (6) was in the Tech Library processing a myriad of tagouts. (b) (6) was overwhelmed and distracted by the volume of Tagout Record Sheets (TORS) (b) (6) had to process in support of MLOCs. [Encl (11)]

90. At 1036, following a satisfactory (SAT) visual inspection by (b) (6) and reassembly of the LO strainer, (b) (6) reported to the EDO that SICLOS was SAT in NR2 Main Engine LO system and requested, and was granted permission by (b) (6) to secure 2A LOSP. During each of the previous times (b) (6) had performed SICLOS, the pumps were OFF prior to the maintenance, and STOPPED at the end of that maintenance. (b) (6) does not

observe the caution note in the "stopping" section of LOPM that reads "CAUTION: ENSURE MAIN ENGINE JACKING GEAR IS **NOT** IN OPERATION", because [redacted] was not aware the turning gear was engaged. The securing of 2A LOSP left the turning gear in operation without LO. [Refs (d) and (e); Encls (11), (14), (37), (53)]

91. At 1049, NR2 Main Engine shaft had exceeded the maximum allowable rotations without LO aligned. [Refs (d) and (e)]

92. At approximately 1100, as the Cold Iron Watch, [redacted] recorded temperatures in the Main Engine Bearing Temperature logs and recorded shaft rotations within the Bell Book without recognizing LOSPs were secured with the turning gear in operation. [Encls (12), (50), (58), (59), (60) and (61)]

93. At 1104, the required 12-hr turning gear rotation expired. No action was taken by engineering personnel to determine if ambient temperature in the space was within 10degF of LO. [Ref (d)]

94. At approximately 1200, [redacted] recorded MRG temperatures and shaft rotations a second time without recognizing the unsafe condition. [Encls (11), (12) (58), (59), (60) and (61)]

Discovery and follow-on Actions

95. At 1215, [redacted] arrived in FWD MMR and heard the turning gear motor running. [redacted] remembered that the 12-hr turning gear cool down period had expired, and entered EOS to confirm equipment status. While in EOS [redacted] saw that the turning gear remained engaged with the shaft rotating with LOSPs stopped. [Encl (16)]

96. Between 1215 and 1219, [redacted] reported to the Tech Library to provide [redacted] Engineering logs and report Cold Iron Watch turnover. They discussed the fact that Bell Log readings are being taken, but [redacted] ceased LO readings in the Main Engine log because the LOSP had been secured at 1036. [redacted] recognized this anomaly and sent [redacted] to FWD MMR to confirm the status of the turning gear. [Encls (11), (12), (58), (59), (60), (61) and (62)]

97. At 1220, [redacted] re-entered the space and stopped and disengaged the turning gear and reported the action to the EDO. An Engineering Log entry was made. The shaft had been rotated approximately 10 and one half times without LO. [Ref (d); Encls (6), (8), (10), (11), (14), (15), (19), and (37)]

98. At 1225, [redacted] arrived in FWD MMR to find the turning gear stopped and disengaged. [redacted] entered EOS and found [redacted] who indicated that [redacted] had reported the action to the EDO. [Encls (12) and (16)]

99. At approximately 1300, MPA notified Chief Engineer of the incident via shipboard telephone. No notification was made to the CDO either by the EDO or senior Engineering leadership. [Encls (6), (8) and (65)]

100. At 1320, the (b) (6) sent an email to (b) (6) providing direction for follow-on actions. This direction included a review of logs, review of tech manuals to determine required action, and to prepare LO strainers for inspection. (b) (6) was directed to not proceed without contacting the (b) (6), and that (b) (6) would be off the ship from 1400-1500 at ESG3. It remains unclear from interviews if a casualty LO sample was ever taken on 11 July 2023. LO Logs do not reference a casualty sample. [Refs (d) and (e); Encls (6), (8), (37) and (59)]

101. At approximately1330, (b) (6) convened a meeting with (b) (6) and (b) (6) in the Log Room. (b) (6) directed them to research the Naval Ships' Technical Manual (NSTM) to determine what remedial action was required. (b) (6) conducted Engineering Log review and performed (b) (6) own review of the NSTM. [Encls (8), (9), (10) and (11)]

102. At 1445, 2A LOSP was started. [Encls (37) and (53)]

103. At approximately 1530, (b) (6) met with (b) (6) and FWD MMR leadership in the Log Room. No further remedial action was taken on 11 July 2023, with the exception of NR2 Main Engine tagout. [Encls (6), (8), (9), (11), (37) and (70)]

104. At 1550, 2A LOSP was stopped. NR2 Main Engine was tagged out in preparation for depth micrometer readings of bearing wear, to check turning gear, verify proper LO flow at sight flow indications and verify there was no Babbitt material in LO strainers. These actions were planned for 12 July 2023. TORS indicates the reason for tagout was to measure turbine bearing wear. [Encls (6), (8), (9), (37) and (70)].

105. At 1930, 8 O'Clock Reports were convened by the CDO in the Wardroom. (b) (6) did not report the incident as the Duty Department Head. [Encl (11)]

106. In the End of Day entry, (b) (6) documented in the Engineering Log that "NR2 MRG was rotated without forced oil. Inspection in accordance with technical manual guidance and results to follow. SWRMC Tech Code will be notified for assistance with inspection." [Encls (6) and (37)]

a. It is more likely than not that this entry was made on the morning of 12 July 2023, because it followed the log closure entry at 2359 on 11 July 2023. [Encl (37)]

b. The (b) (6) entry makes no reference of notification to the CO, which is at a minimum, implicitly required by CO's Standing Order #4. [Encls (4), (6), (37) and (54)]

Command Notifications and Follow-on Inspections

107. On 12 July 2023 at 0645, the CO arrived onboard. [Encl (65)]

108. At 1146, the CO departed to complete his PCS pack out. He had yet to be informed of the turning gear incident. [Encls (4), (6), and (65)]

109. At 1227, NR2 Main Engine and MRG tagouts were cleared. Depth micrometer readings were documented in the Engineering Log with micrometer serial number and calibration information. Engineering Log entry does not list the senior member present to observe. Chief Engineer was notified of results. Measurements also documented in Journal Bearing log. [Encls (37), (71) and (72)]

110. At 1340, 2A LOSP was started to conduct SICLOS. [Encls (37), (53) and (69)]

111. At 1400, SICLOS was conducted and logged in the Engineering log. SAT results were not included in the log entry as required. [Encls (36), (37) and (69)]

112. At 1523, 2A LOSP was stopped. [Encls (37) and (53)]

113. Between 1524 and 1556, LP and HP side first reduction and bull second reduction gear covers were lifted, to facilitate visual inspection of gear teeth and validate LO spray pattern. Covers were logged closed. The Inspection was witnessed by Chief Engineer. The opening of reduction gear covers require CO's permission, but no such permission was obtained in advance. [Encls (4), (37) and (54)]

114. Between 1600 and 1700, Chief Engineer reported the incident to SWRMC and requested onboard technical assistance for NSTM required inspections. The (b) (6) does not recall the exact time this call is made. [Encls (6) and (8)]

115. At approximately 1615, Chief Engineer made contact with the CO via cellular phone. (b) (6) informed the CO that the NR2 Main Engine shaft was rotated without LO. (b) (6) does not specify how long ago the incident occurred, or why the report was delayed in excess of 24 hours. [Encls (4) and (6)]

116. At approximately 1630, the CO made an initial report to COMPHIBRON FIVE (CPR5) Commodore via cellular phone text message. The CO indicated that this was an initial report, and that he was awaiting confirmation of the remedial actions required by NSTM. He communicated his intent to include this follow-up in a "5W" email later that evening. [Encl (4)]

117. Between 1700 and 2100, the CO initiated a series of text exchanges with the Chief Engineer to craft the 5W email. It is throughout this process that the CO realized that the Chief Engineer delayed reporting the incident which occurred between 1036 and 1220 on 11 July 2023. [Encls (4) and (6)]

118. At 2120, the CO sent "5W" email to CPR5 Commodore. His report is consistent with the FoF listed throughout this document. The CO also reported that authority to change plant status has been removed from the EDO, and elevated to the (b) (6) and (b) (6) until further notice. [Encls (4) and (73)]

119. On 13 July 2023 at 0656, the CO arrived onboard. [Encl (65)]

120. At 0905, NR2 Main Engine was tagged out in support of MRG Health Assessment under the cognizance of Ship's Force and SWMRC. TORS indicates reason for tagout is to inspect MRG and spray nozzles. [Encls (37) and (74)]

121. Between 1033 and 2000, all NR2 Main Engine turbine, MRG pinions, gears and turning gears were opened, inspected visually and with borescope, locked and closed out. Results of SWRMC C263 inspection was SAT. No abnormal conditions were found on the gear assembly or bearings. NR2 MRG assembly was deemed safe to operate with no restrictions. [Encls (37) and (75)].

Command-level Leadership Assessment of Engineering Personnel and Readiness

122. The CO has solicited the input of several unbiased off-ship entities to include an embedded ESG3 Steam Expert, (b) (6), EAP Assessors and Readiness Assessment Teams to confirm his evaluation of Engineering Department performance. The summary of that feedback suggested that the department was inexperienced, and the Chief Petty Officers are marginally effective, but that BOX personnel were trending in a positive direction. The CO's assessment was that the crew needed to get underway on a hot plant to develop proficiency. [Encl (4)]

123. The CO characterized the (b) (6) as present, knowledgeable, and up until this incident, forthright. Prior to 11 July 2023, the (b) (6) persistently communicated with the CO in a timely and factual manner. The delay in reporting the turning gear having been rotated without LO was not in line with (b) (6) previous behavior. [Encl (4)]

124. The CO also assessed that the Chief Engineer took too much on (b) (6) given that the MPA, previous Top Snipe and several of the Chief Petty Officers were not particularly strong. [Encl (4)]

125. In soliciting input from the (b) (6) on the performance of the (b) (6), (b) (6) elected to exercise (b) (6) right to remain silent. [Encl (6)]

126. The CO, XO and CMDCM characterized (b) (6) as a leadership challenge. (b) (6) has been the subject of six formal counseling sessions held within the department, and had been the source of conflict for the previous Top Snipe. During preparations for the most recent LOA, (b) (6) was shifted from AFT MMR to FWD MMR to be aligned with what was viewed as a more materially ready plant, and stronger Petty Officer leadership. [Encls (4), (5) and (7)]

Opinions

General

1. The subject event can be best characterized as a ***near miss*** given that the MRG was not damaged despite the turning gear operating without LO for much longer than what is permitted by reference (d). [FoF 22f, 79a, 79b, 80-83, 85, 87, 89-95]

2. BOX's Engineering Department is experiencing organizational drift into failure. [Ref (b)] The slow erosion of standards over time is evident in the lack of a robust qualification process [FoF 32, 34-37, 39, 42-44 and 79a], lack of deckplate procedural compliance [FoF 22a-d, 29, 66, 80, 84, 86, 87, 90, 100, 106b], marginalized training [FoF 25, 26], inadequate supervision [FoF 84a, 85, 87b], and lack of adherence to formal written orders. [FoF 53, 62, 63, 99, 113]

3. This event revealed that BOX Engineering Department has all 'common traits of a mishap ship' with the exception that they are not viewed as 'above average'. To that end, watch standers did not perform specific required actions they were trained and qualified to perform [FoF 90, 92, 94], a previous near-miss has occurred without sufficient remedial action [ref (k)], poor log keeping is a practice [FoF 29-31, 84d, 86, 92, 100, 106b, 109, 111], there was substandard risk management in planning the execution of MLOCs [FoF 83], and there was a clear lack of watch team coordination [FoF 84-88, 90]. I assess that they are likely at or approaching the critical safety margin threshold which warrants prompt and substantial remedial action.

Causal Factors

4. Lack of procedural compliance (b) (6) was met with a formal written procedure (LOPM) that required (b) (6) to take an action which (b) (6) did not perform. That action was to ensure that the turning gear was not engaged prior to securing 2A LOSP at 1036, 11 July 2023. [FoF 90]

5. Lack of ownership. (b) (6) accepted the watch after an EDO turnover which (b) (6) characterized as "could have been better", and conceded that (b) (6) did not thoroughly review the plant status cover sheet prior to taking the watch. (b) (6) was entrusted with the responsibility of knowing the turning gear was engaged and rotating the shaft prior to taking the watch. A proper turnover would have allowed (b) (6) to exercise a questioning attitude and provide forceful backup to (b) (6) by not granting permission to stop 2A LOSP. [FoF 80, 81]

6. Both (b) (6) and (b) (6) actions or inactions alone represent a short, but complete error chain. Had either performed their duties appropriately, the incident would have been avoided. Although the errors were not done with malice, they operated below the safety system design thresholds put in place, which included a formal procedure (LOPM) and a formal watch turnover process governed by instruction. [FoF 80, 90, 91]

Contributing Factors – Training

7. Although BOX Engineering Department demonstrated steady progress throughout 16 months of ATGSD and EAP-led training from January 2022 – May 2023, lack of procedural compliance with EOSS was a consistent observation which required persistent oversight. This shortfall has not been fully remediated, as evidenced by (b) (6) lack of adherence to LOPM on 11 July 2023. [FoF 22, 90]

8. EOMRs consistently called for the need for additional ETT-led evolutions. Material challenges with BOX's engineering plant, particularly from 5 May – 11 July 2023, drew a focus away from fulfilling this recommendation. BOX ETT, which is led by the MPA, did not correct this shortfall. [FoF 26]

9. During a July 2022 LTT, EAP found the turning gear still engaged following the shaft being jacked the day before. Although this occurred nearly a year before the subject event, this feedback provided an opportunity to address a lack of procedural compliance and insufficient level of knowledge with respect to the turning gear. If corrective action was taken, it did not trigger (b) (6) to take pause when reading the caution note in LOPM requiring that LOSPs remain in operation with the turning gear engaged. [FoF 22f]

10. ETT is not being effectively managed by the (b) (6) and (b) (6). The inability of the department to produce a training syllabus suggests that there is no Plan, Brief, Execute, Debrief (PBED) process to identify proficiency shortfalls and deliberately remedy those shortfalls by tailoring training for the right people, at the right place at the right time. [FoF 26]

11. The omission of (b) (6) from ETT, who is the longest-tenured BOX Engineer, is noteworthy. The CIO did not address why this is the case in interviews with the (b) (6) and (b) (6), and missed an opportunity to investigate this further. However, it is presumed that (b) (6) lack of involvement was either a deliberate decision based on a lack of trust, or mismanagement of available qualified personnel. If the former is true, it calls into question why (b) (6) continued to be trusted to stand EOOW and EDO. [FoF 24]

Contributing Factors – Log Keeping

12. EAP identified the Engineering Log and Operating Logs as not trending ready to support light-off in February-March 2023. This trend of poor log keeping continues in BOX, highlighted by an excessive use of late entries and marginally readable hand-writing. [FoF 29, 30]

13. Late log entries are often a sign insufficient plant control, in that evolutions are performed outside of the purview of the EDO during the time of execution. This was the case with MLOCs on 11 July 2023, and throughout MRG controlling actions on 12 & 13 July 2023. [FoF 84, 87]

14. The MPA has been inconsistent in providing logs to the (b) (6) for daily review in a timely manner. (b) (6) spends an excessive amount of time daily reviewing logs. Although (b) (6) is directly accountable to the (b) (6) for all logs, LCPO and LPO leadership have not sufficiently trained and remediated on poor log keeping. [FoF 31]

15. Poor log keeping contributed to a challenging reconstruction of events for the purpose of this investigation. [FoF 29-31, 84d, 86, 92, 100, 106b, 109, 111]

Contributing Factors – Qualifications

16. (b) (6) absence of an EDO qualification on BOX is an administrative oversight, but one that calls into question (b) (6) authority to chair EDO boards and recommend EDO qualifications to the (b) (6). [FoF 34]

17. The standard applied to (b) (6) EDO qualification appears to have been superseded by the need to maintain coverage across a 6 section inport watchbill. (b) (6) and (b) (6) progress toward EDO qualification did not meet the timeline for (b) (6) departure, placing that burden of qualification on (b) (6) as part of the Watch Team Replacement Plan. Because the chairman of (b) (6) oral board was the departed Top Snipe, and the (b) (6) did not sit the board, I was unable to ascertain the quality of (b) (6) performance during the oral board. [FoF 35-39, 41, 42]

18. The (b) (6) decision to remove FCPOs from the EDO watchbill on 13 Jul 23 was prejudicial to paygrade, and did not sufficiently address the problem, which was (b) (6) lack of readiness to stand a proficient watch. [FoF 40, 89]

19. The (b) (6) should not delegate authority to chair EDO oral boards. The need to measure the risk associated with entrusting such responsibility should be (b) (6) alone, as (b) (6) is accountable to the CO for this standard. [FoF 38-42, 50, 51]

20. There is strong evidence that junior personnel are trained and qualified in watch stations they lack proficiency standing. These qualifications appear to have been granted based on sufficient academic knowledge, but limited practical application. All PQS books require, at a minimum, three unqualified watches to be stood as part of the qualification process, which includes plant alignment evolutions. The absence of a routine ETT-led evolution curriculum has failed to close this gap in proficiency. [FoF 22e, 22g, 22i, 26, 43, 44]

21. The MMR Lower Level qualification granted to (b) (6) was done under the cognizance of (b) (6), who chaired the oral board. (b) (6) lack of knowledge of LOSPs and claim that (b) (6) has never operated one, provides at least one example that PQS line items have been falsified, or under the most favorable of conditions, have been provided through "walk-through/talk-through" oversight. This does not meet the spirit and the intent of required evolutions or tasks in the PQS. [Ref (k); FoF 43, 44]

Contributing Factors – Commander's Intent, Processes and Governing Documents

22. The Chief Engineer was derelict in (b) (6) duty to notify or seek permission from the CO, to wit:

a. (b) (6) did not notify the CO that the turning gear was engaged and rotating the shaft without LO for a period of roughly 27 hours. [FoF 90, 115-117]

b. [redacted] did not seek permission from the CO to open reduction gears in support of the 12 July 2023 inspection. Notification was made after the fact. [FoF 54, 113]

c. [redacted] has maintained Standing Orders that allow the placement of alarms in CUTOUT for the purpose of PMS without prior approval from the CO, in violation of the CO's own Standing Orders. [FoF 22c, 53]

23. The [redacted] failed to make timely notification to the Technical Warrant Holder (SWRMC for Main Reduction Gears) following the 11 July 2023 incident. [90, 114]

24. The [redacted] failed to produce a revised EDORM with [redacted] signature throughout the duration of his tenure. This important document was not updated with precision or with sufficient prioritization given that it was last signed in January 2020. [FoF 56, 62]

25. The [redacted] failed to maintain a formal process for documenting review of the EDORM by Engineering personnel. If such a process existed, there is no accountability for failing to review the document, as nearly every enlisted member of the department is unaware that such a record is kept. [FoF 56, 62].

26. The [redacted] failed to provide forceful backup to the [redacted] as [redacted] primary assistant for the items cited above. [FoF 8, 25, 26, 27, 61, 99, 100, 103]

27. The CO's Standing Orders require revision to address the following:

a. To seek permission to engage the turning gear when such engagement will result in shaft rotation. The approval items currently listed includes rolling or stopping of shafts, but does not explicitly include use of the turning gear. [FoF 47, 48, 54]

b. To include a section on watch relationships associated with the EDO.

c. To include the EDO as a supervisory watchstander required to perform monthly review of the CO's Standing Orders.

d. To include the EDO in the list of supervisory watchstanders in a special position of trust referenced in SO#1.

28. An improved process for submitting, routing and approving all Engineering watchbills is required. The duty section personnel should be made aware of their watch requirements 24-hrs in advance. [FoF 58, 79d]

29. The EDO Turnover sheet should, at a minimum, list all equipment that is provided on the Engineering Log cover sheet. [FoF 65, 66]

30. The Engineering practice of writing on the white board in EOS to retroactively log equipment changes needs to stop. This results in latency in the Cold Iron Watch discovering the change in equipment that falls under their cognizance. It is unclear from interviews when (b) (6) discovered that 2A LOSP was stopped, but (b) (6) undoubtedly learned this after 1036 which is the time it was logged. [FoF 68]

Contributing Factors – Plant Status

31. The transition from Auxiliary Steaming to Cold Iron left equipment operating that normally falls under the cognizance of the Upper and Lower Level watch. A process for securing from MLOCs is required to delineate what equipment, in this case the turning gear and LOSPs, shall be secured, when it should be secured, and by whom. [FoF 79b, 92, 94]

Contributing Factors - Timeline

32. If a "MAIN ENGINE JACKING GEAR" sign was placed on the LOSP Control Panel, (b) (6) would likely have exercised a questioning attitude and would not have stopped 2A LOSP when following LOPM. It appears that BOX has corrected this deficiency, given that the photo contained in enclosure (78), which was taken on 21 July 2023, shows this sign displayed on the LOSP Control Panel. [FoF 90]

33. Had the CDO been notified that the turning gear was in operation on 10 July 2023, it would have been a duty section turnover item. The absence of this information prevented the off-going and on-coming CDO from addressing it at duty section turnover, which was attended by (b) (6) [FoF 74, 99, 105]

34. The governing documents which inform the Deck Log and Engineering Log midnight entries should include an 'if', 'then' statement such that shaft rotation via the turning gear shall be included in that entry when in operation. [FoF 78]

35. Engineering senior enlisted leadership did not effectively manage the movement of (b) (6) to FSA duty, in that there was no prior notification to (b) (6) that (b) (6) would be shifting from Sounding & Security to MMR Cold Iron to cover that gap. [FoF 79d]

36. Had (b) (6) conducted a thorough space walkthrough on the morning of 11 July 2023, (b) (6) undoubtedly would have learned that the turning gear was in operation in FWD MMR. (b) (6) failed to conduct an adequate space walkthrough, and did not sufficiently review the plant status prior to taking the watch. [FoF 60, 80]

37. The Duty Section 5 and FWD MMR personnel were not actively monitoring the 12-hr expiration of the turning gear rotation. If this time-based condition had been more closely monitored, a check of the ambient temperature in the space at 1104 on 11 July 2023 would have provided another opportunity to assess the plant conditions and correct the discrepancy. [FoF 74, 90, 92-94, 97]

38. Lack of formality in assigning MLOC PMS checks to a specific maintenance person(s) in SKED resulted in lack of proper oversight, and increased risk of those checks being done incorrectly. Specifically, the absence of a more formal PBED process at MP Division quarters, allowed a motivated (b) (6) to take on a light-off check (SICLOS) without proper supervision. [Encl (76); FoF 83]

39. (b) (6) failed to properly notify the EDO that LO Sequencing Checks had commenced, left that maintenance prematurely to perform a counseling session, and did not report completion as the senior maintenance person. The fact that (b) (6) is both EOOW and EDO qualified, and understands the importance of maintaining plant control and making timely log entries, makes this an even more egregious transgression. [FoF 18, 84a, 85, 86]

40. (b) (6), by all accounts, is persistently on the deck plates to monitor FWD MMR evolutions. (b) (6) did not adequately prioritize the supervision of (b) (6), and instead elected to perform a counseling session during MLOCs. Because (b) (6) delegated responsibility for MLOC assignment to more junior Petty Officers at quarters, (b) (6) should have ensured that they were present to supervise (b) (6) prior to departing the space. [FoF 19, 83, 85-88, 90]

41. The lack of formal assignment in SKED for MLOCs left a Space Supervisor absence during SICLOS. (b) (6) fulfilled a Space Supervisor requirement in LODS, but was not assigned, nor did (b) (6) assume ownership of the remainder of that maintenance. This allowed (b) (6) close the LOSP link in the error chain. [FoF 83, 88]

42. (b) (6) was distracted and overwhelmed with a high-intensity EDO watch that (b) (6) was ill-prepared to conduct. Given (b) (6) experience on steam plant ships, (b) (6) should have known that 72-hr MLOCs were in progress and that the turning gear was engaged and rotating. (b) (6) failed to exercise a questioning attitude when granting permission to stop 2A LOSP. [FoF 37, 39, 66, 80-82, 89, 90, 96]

43. (b) (6) lack of proficiency as the Cold Iron Watch prevented (b) (6) from recognizing the symptoms of the problem. A properly qualified Cold Iron Watch would have questioned the need for Bell Book recordings after having logged the stoppage of 2A LOSP at 1036. Although this would not have prevented BOX from exceeding the maximum shaft rotations (1 and ¼) without LO aligned, it would have reduced the risk of potential catastrophic failure of the MRG. [FoF 79, 92-94]

44. (b) (6) level of knowledge, questioning attitude and ownership in the FWD MMR equipment is what enabled (b) (6) to break the error chain by stopping the turning gear. [FoF 95, 97, 98]

45. The (b) (6) should have prioritized controlling actions following the incident in lieu of departing the ship for a meeting at ESG3. Notification to the CO at this point would have afforded CAPT Chieslukowski decision space to take immediate action to determine the extent of damage. [FoF 99-101, 106]

46. The decision to delay any remedial action until 12 July 2023 demonstrates poor decision making on the part of the (b) (6). Similarly, the MPA failed to provide forceful backup and challenge this decision. [FoF 99-101, 104]

Contributing Factors – Miscellaneous

47. The absence of steam plant-specific training in the CO's Major Command pipeline, and the fact that BOX was CAPT Chieslukowski's first steam plant ship, required him to rely heavily on the (b) (6) to provide sage counsel. A level of enduring trust had been earned over a period of 2 years. The CO should have increased his oversight of the department when it became apparent that theDecember 2022 DEOCS survey revealed questionable leadership. [FoF 11, 20]

48. The Executive Officer should have exercised increased oversight of Engineering Training Team. Although this responsibility is routinely delegated to the (b) (6) and (b) (6), the ATG/EAP EOMRs revealed a need for additional ETT-led Engineering evolutions, particularly in more recent training milestones. [FoF 22, 23, 25, 26]

49. The (b) (6) did not sufficiently hold people accountable, or failed to elevate persisting issues within the Department for adjudication by the Executive Officer and Commanding Officer. [FoF 21, 31, 125]

a. More formal administrative action should have been taken on (b) (6) in light of the December 2022 DEOCS Survey, particularly when viewed in parallel with a history of six formal counseling chits. [FoF 21]

b. The (b) (6) overall performance appears to have been marginal despite a consistent deckplate presence. A firm opinion of that performance could not be derived, primarily because of the Chief Engineer's election to invoke 31b rights during his interview. [FoF 31, 125]

Recommendations

1. I recommend, at a minimum, a Letter of Instruction (LOI) be issued to the CO by ESG3. The CO placed an excessive amount of trust in the (b) (6) without having sufficiently verified that training, qualifications, log keeping, and procedural compliance was trending in a positive direction. There is sufficient objective quality evidence provided in this investigation that suggests he knew, or should have known, that the (b) (6) was under-performing in key facets of (b) (6) job. Additionally, he should have taken more substantial action to address the performance of the former Top Snipe and (b) (6) following the DEOCS Survey in December 2022. That said, the CO took prompt and immediate action when informed of the turning gear incident and fulfilled his obligation to notify higher headquarters without delay. Furthermore, I assess that CAPT Chieslukowski is both capable and willing to arrest this negative trend through more active leadership. The arrival of a new (b) (6) and (b) (6) should provide him sufficient opportunity to correct course.

Subj: COMMAND INVESTIGATION INTO THE MAIN REDUCTION GEAR CASUALTY THAT OCCURRED ONBOARD USS BOXER (LHD 4) ON 11 JULY 2023

2. I recommend that a weekly report be furnished to CPR5 and ESG3 by the CO to address the status of all positively endorsed recommended actions contained herein.

3. I recommend that the XO be issued a LOI from the Commanding Officer. As the immediate representative to the CO, he was responsible for all training programs and administration onboard BOX. ETT was a defunct program as evidenced by a lack of short and long-term training plans, and a failure to plan ETT-led plant evolutions in response to ATG/EAP recommendations. Additionally, the (b) (6) inability to produce a signed revision to the BOX EDORM suggests that an annual review of command instructions (5215) is not being performed by his Administration Department, or the delay in such revision was accepted without correction. This should not have been acceptable for what is arguably the most important Engineering Instruction on the ship.

4. I recommend that the XO review, endorse and forward to the CO for approval a short and long term ETT Training syllabus at the earliest opportunity. This syllabus should include, at a minimum, a robust package of ETT-led plant evolutions to build deckplate proficiency and enforce a culture of strict procedural compliance, and Engineering Log and Operating Log training.

5. I recommend no administrative action for the CMDCM. He reported onboard in February 2023 and has put measures in place to assess and render support to the CO and Engineering Leadership. I do recommend that he increase the frequency in meeting with Engineering Department LCPOs, and spend more time touring Engineering spaces.

6. With respect to (b) (6), Chief Engineer, I recommend that this investigation be forwarded to (b) (6) gaining command for further disposition. Had (b) (6) not been formally transferred on 21 July 2023, I would have recommend that (b) (6) be Detached for Cause (DFC) due to substandard performance involving one or more significant events resulting from gross negligence, or disregard of duty. The 27-hr delay in notifying the CO about the turning gear having been rotated without LO is sufficient justification for DFC on its own.

7. I recommend, at a minimum, that (b) (6) be issued a LOI by Expeditionary Strike Group THREE. By most accounts, (b) (6) is the most readily present Officer within the Engineering spaces, and has made quality efforts to improve the department. However, (b) (6) administrative performance has been substandard. As ETT Leader (b) (6) has failed to foster an effective program, (b) (6) has been unsuccessful in improving the quality of Engineering and Operating Logs, and has not enforced PQS standards in a manner that has ensured proficient watch standing. Additionally, the relationship (b) (6) fostered with the Chief Engineer was hard to determine based on (b) (6) choice to invoke 31b rights, however, there is anecdotal evidence to suggest MPA did not provide enough forceful backup or exercise sufficient questioning attitude to keep the department on a safe course, despite being a fellow (b) (6).

8. I recommend that the CO initiate DFC processing for (b) (6). Although the scope of this investigation does not provide additional context into the reason for six formal counseling chits, a senior enlisted member with 4 years of onboard experience should be a pillar of trust and

confidence for the CO. It is apparent that BOX has exhausted all lesser measures to address substandard performance to include reassignment from AFT to FWD plant, and the aforementioned formal counseling. (b) (6) chairing of (b) (6) MMR Lower Level qualification oral board, coupled with (b) (6) claim to have never operated LOSPs, calls into question the efficacy of junior enlisted qualifications for those under (b) (6) charge.

9. I recommend that the CO issue formal written counseling for (b) (6). (b) (6) accelerated EDO qualification to fulfill a watch team replacement strategy, to some extent, placed (b) (6) in a compromising position while (b) (6) failed to qualify EDO. However, a FCPO with 13 years of service should have the courage to not accept the watch until (b) (6) is ready, and should have withheld permission to start or stop equipment until (b) (6) had a full grasp of plant operations.

10. I recommend that (b) (6) EDO qualification be held in abeyance until the new (b) (6) has conducted an oral board, and (b) (6) readiness to stand EDO meets the appropriate standard.

11. I recommend that the new Chief Engineer issue formal written counseling for (b) (6). Supervisory Control is a Sound Shipboard Operating Process that was lacking on 11 July 2023 at the LPO-level. Delegating Supervisory Control to junior Petty Officers, given the lack of proficiency and experience within that group, was a key contributing factor that warrants remediation.

12. I recommend that the new Chief Engineer issue formal written counseling for (b) (6). Although (b) (6) was trained and qualified to perform plant evolutions on 11 July 2023, (b) (6) action to secure 2A LOSP was not done with malice. Focused counseling on Sound Shipboard Operating Principles, performed by a more senior Officer, is appropriate given the Sailor's paygrade and level of experience. Additional corrective measures for the entire department are germane.

13. I recommend the CPR5 Staff conduct a validation of all BOX Engineering Department qualifications listed in reference (i). This validation should include, but not be limited to, ATG-provided level of knowledge exams and oversight of plant operations during subsequent ETT-led evolutions. Alternatively, an ATG tailored LTT could be done in lieu of such validation if CPR5 does not have the resources to perform this action.

14. I recommend BOX conduct a thorough review of the Engineering PQS Qualifiers List to ensure that the authority to sign PQS line items is held at a sufficient paygrade and proficiency level.

15. A parallel revision of both the CO's Standing Orders and the BOX EDORM should be conducted to ensure these documents are in alignment for notification and permission items, specifically engaging/disengaging turning gears and for placing alarms in CUTOUT. Additionally, the CO and Chief Engineer should consider making modifications as cited in opinions 24 and 27.

15. Revisions to the BOX EDORM should address a time-based requirement for submitting both inport and underway watchbills for review, endorsement and approval. I recommend that approval of these watchbills be secured not less than 24-hrs prior to execution.

16. I recommend revising the EDO Turnover Sheet to include all equipment listed on the Engineering Log daily coversheet, including the turning gear. This turnover sheet should sufficiently address outstanding items from the previous duty day, to include whether a turning gear is engaged and turning the shaft.

17. I recommend that watch standers cease the practice of writing plant actions on the EOS white board. Direct and timely notification via an organic communications circuit should be used to make these notifications in real-time.

18. I recommend that BOX produce a Securing from MLOC/Cold Iron Orders document. Alternatively, modification to the standard MLOC document to reflect what checks must be performed to support hot plant testing, and what equipment should be secured following that testing is appropriate such that the continuum of plant evolutions are clear and unambiguous to supervisors and operators.

19. I recommend that an EOSS Feedback report be submitted for LOPM to include use of a "Main Turning Gear Engaged" sign on the LOSP Control Panel. A Temporary Standing Order or approved pen and ink changes to LOPM should be implemented immediately to formalize this procedural change awaiting approval and issuance from Naval Sea Systems Command.

20. I recommend that BOX revise the midnight log entries for both Deck and Engineering Logs to provide status of an engaged turning gear when in operation (condition-based).

21. I recommend that the EDO log the on-coming EDO start time and completion of engineering space walkthrough prior to accepting the watch. This provides for the necessary accountability, and monitoring of that process.

22. I recommend that future MLOC maintenance checks be scheduled by name in SKED. This formalizes accountability for performing the check and requires supervisors to plan and brief as part of the PBED process.

23. I recommend that future MLOC documents provide for a signature line and a printed name line so it is more clear who has performed the action.

24. I recommend that the revised BOX EDORM establish policy for how monthly review of that document shall be recorded, and how that accountability is maintained on file for a minimum of 2 years.

25. I recommend that the position of Chief Engineer be present for all EOOW and EDO boards. If this is not feasible, authority to waive that requirement shall be held by the CO.

26. I recommend that BOX leadership continue to execute short and long-term remediation actions listed in the CO-approved 18 July 2023 Critique for this event, for those which are not contained herein.

(b) (6)