



UNITED STATES MARINE CORPS
1ST MARINE AIRCRAFT WING
UNIT 37101
FPO AP 96373-7101

IN REPLY REFER TO:

5830

(b)(6)

(b)(3)

28 APR 17

From: (b)(6) (b)(3) 10 U.S. Code § 130b

To: Commanding General, 1st Marine Aircraft Wing

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
OSPREY OF MARINE MEDIUM TILTROTOR SQUADRON 265 ON 13 DECEMBER
2016 OFF THE COAST OF OKINAWA, JAPAN

Ref: (a) JAGINST 5800.7F (JAGMAN)

Encl: (1) 16 December 2016 MV-22 Mishap Command Investigation Appointment Letter
(2) Command Investigation Extension Approval
(3) Glossary of Acronyms and Terms
(4) VMM-265 Flight Schedule for 13 December 2016
(5) Signed Risk Assessment Worksheet for DN06
(6) Mtg Minutes VMM-265 Standardization Board
(7) Statement derived from interview of (b)(6) (b)(3) 10 U.S.
(8) Summary Testimony of (b)(6) (b)(3) 10 U.S. Code
(9) Summary Testimony of § 130b
(10) Summary Testimony of (b)(6) (b)(3) 10 U.S. Code §
(11) Excerpt from UNITED STATES ATP 3.3.4.2. (C)STANDARDS RELATED
DOCUMENT (SRD)
(12) Excerpt from AIR NTTP 3-22.3-MV-22
(13) Excerpt from (b)(6) (b)(3) 10 NATOPS jacket
(14) Excerpt from U.S. Code § NATOPS jacket
(15) Excerpt from (b)(6) (b)(3) 10 NATOPS jacket
(16) Excerpt from (b)(6) (b)(3) 10 U.S. NATOPS jacket
(17) Excerpt from (b)(6) (b)(3) 10 U.S. NATOPS jacket
(18) Consolidated MARINE SIERA HOTEL AVIATION REPORTING
PROGRAM reports for the crew of Dragon 06
(19) Solar Lunar Aplmanac Prediction 13 DEC 16
(20) 13 December 2016 DN06 Flight Smartpack and Load Computation
(21) 13 December 2016 DN06 Flight weather packet
(22) YORON divert information brief
(23) DN06 Recovered Flight Data Warnings, Cautions and Advisories
(24) DN06 Recovered Flight Data Flight Recreation
(25) VMM-265 Operations Duty Officer Logbook
(26) NAVAIR assistance request
(27) Statement provided by (b)(6) (b)(3) 10 U.S. Code §
(28) Statement provided by 130b
(29) Statement provided by
(30) Statement provided by
(31) Statement provided by
(32) Statement provided by

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22 OSPREY OF MARINE MEDIUM TILTROTOR SQUADRON 265 ON 13 DECEMBER 2016 OFF THE COAST OF OKINAWA, JAPAN

- (33) Engineering Analysis and Supporting Data Quick Report for JAG Investigation MV-22B; BuNo: 168027; Mishap Date (12 DEC 2016)
- (34) Engineering Analysis Quick Report MV-22; BuNo: 168027 Incident Date (12-December-2016)
- (35) Photographic evidence of USAF MC-130J Aerial Refueling Hose Damage
- (36) Excerpt from NAVMC 3100.11C MV-22B Training and Readiness Manual
- (37) MAG 36 Pilot Controller Handbook Excerpt
- (38) Dragon 06 Fuel Analysis Diagram
- (39) Memorandum for the Joint Committee on New Aircraft in Japan (MV-22)
- (40) Excerpts from Dragon 06 flight Smartpack
- (41) Recovered Voice and Data Recorder, Model K Flight Data for DN06
- (42) Consolidated Weather Data for 13 December 2016
- (43) Command Investigation Extension Request
- (44) Aviation Background Review Summaries
- (45) Summary Testimony of (b)(6) (b)(3) 10 U.S. Code § 130b
- (46) Excerpt from VMM-265 Flight Operations Standard Operating Procedures
- (47) VMM-265 MSHARP HOTBOARD
- (48) Summary Testimony of (b)(6) (b)(3) 10 U.S. Code § 130b
- (49) Excerpts of Aircraft Discrepancy Book for MV-22 BuNo 168027
- (50) BuNo 168027 Aircraft Logbook
- (51) Report containing findings from the in-field investigation concerning VMM-265's Class A mishap involving Aircraft BuNo 168027 which occurred on 13 December 2016.
- (52) Official DD175-1 Weather Forecast for DN06
- (53) A1-V22AB-NFM-000 MV-22B NATOPS Flight Manual
- (54) ASIST DN06 mishap recreation video
- (55) Yoron ICAO RORY divert information
- (56) Summary Testimony of (b)(6) (b)(3) 10 U.S. Code § 130b

1. This report completes an investigation conducted in accordance with reference (a) and enclosures (1) and (2) to determine the circumstances surrounding a MV-22B aircraft mishap resulting in injuries to five crewmembers and the total loss of the aircraft which occurred 13 Dec 2016 in the vicinity of Okinawa, Japan.

2. In compliance with 10 U. S. C. 2255 and reference (a), (b)(6) (b)(3) 10 U.S. Code § 130b is qualified to conduct this investigation having extensive tactical aviation experience. (b)(6) (b)(3) a qualified Aviation Safety Officer, consulted on all safety related matters. (b)(6) (b)(3) 10 U.S. Code § 130b

3. (b)(6) (b)(3) 10 USC 130b Staff Judge Advocate, 1st Marine Aircraft Wing (1st MAW), provided legal guidance during the course of this command investigation.

4. All reasonably available and relevant evidence was collected. There were no difficulties encountered during the conduct of the investigation.

5. Acronyms and definitions are listed in enclosure (3).

6. The Findings of Fact are organized by subject area in the following order:

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A. Identity of United States Service Members

B. VMM-265 Training, Scheduling, Human Factors Monitoring, and Operations

C. Background and Instruction of

(b)(6) (b)(3) 10 U.S.
Code § 130b

D. Background and Instruction of

E. Background and Instruction of

F. Background and Instruction of

G. Background and instruction of

H. Mishap Aircraft and VMM-265 Maintenance.

I. Summary of events previous 72 hours.

J. Mishap flight.

K. Post mishap and Search and Rescue (SAR) efforts.

L. Engineering determinations.

7. Executive Summary. On the night of 13 December 2016, a MV-22B, call sign Dragon 06 (DN 06), piloted by (b)(6) (b)(3) 10 U.S. Code § 130b USMC and crewed by (b)(6) (b)(3) 10 U.S. Code § 130b USMC, made an emergency water landing off the coast of Okinawa Japan during a routine training mission. (b)(6) (b)(3) 10 U.S. Code § 130b was on board DN 06 as a non-flying pilot at the time of the emergency landing.

a. At approximately 21:29:00 JST, DN 06 conducted an emergency controlled water landing off of the eastern coast of Okinawa, Japan, two nautical miles (nm) southeast of Higashi. The controlled water landing resulted in the complete loss of aircraft Bureau Number 168027 but did not result in any damage to civilian property or injure non-military personnel.

b. This investigation concludes that DN 06 made an intentional water landing under controlled, powered flight following the midair impact of its right proprotor with the drogue and hose of a United States Air Force MC-130J refueling aircraft during a routine training sortie. There were no indications that a mechanical malfunction or maintenance malpractice were contributing factors to this mishap.

c. (b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code § 130b

suffered injuries as a result of the mishap. (b) (6) b (3) 10 U.S.C 130b

(b) (6) b (3) 10 USC 130b

d. (b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) were qualified and medically fit for flight duties. The pilots and aircrew maintained at (b)(3)

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least 12 hours of crew rest the night prior to the mishap and showed no indications of fatigue or stress leading up to the mishap flight.

Findings of Fact

A. Identity of United States Service Members.

1. (b)(6) (b)(3) 10 U.S. Code § 130b USMC, was the Tiltrotor Aircraft Commander (TAC) of DN06. [Encl. 4]
2. (b)(6) (b)(3) 10 U.S. Code § 130b USMC, was the Tiltrotor Second Pilot (T2P). [Encl. 4]
3. (b)(6) (b)(3) 10 U.S. Code § 130b USMC, was designated as an additional T2P of DN06. (b)(6) (b)(3) 10 U.S. Code § 130b was located in the aircraft cabin. [Encl. 4]
4. (b)(6) (b)(3) 10 U.S. Code § 130b USMC, and (b)(6) (b)(3) 10 U.S. Code § 130b were the crew chiefs (CC) of DN06. [Encl. 4]
5. (b)(6) (b)(3) 10 U.S. Code § 130b were permanently assigned to Marine Medium Tiltrotor Squadron-265 (VMM-265). [Encl. 13, 14, 15, 16, 17]

B. VMM-265 Training, Scheduling, Human Factors Monitoring, compliance agreement, and regulations in the conduct of training.

6. The planning, scheduling, and operations of DN 06 were routine and consistent with applicable regulations and practice, to include Article VI of the Treaty of Mutual Cooperation and Security between Japan and the United States of America. [Encl. 4, 39]
7. The planning, scheduling, and operations of DN 06 occurred within the scope of the Training and Readiness Manual of the MV-22B. [Encl. 4, 36]
8. The Pilot Training Officer (PTO), Operation's Officer, and Squadron Commanding Officer were actively involved in the allocation of aircrew human resources and managed risk through a standardized Risk Assessment Worksheet (RAW). [Encl. 4, 5]
9. (b)(6) (b)(3) 10 U.S. Code § 130b was the squadron's Officer in Charge of the Department of Safety and Standardization. [Encl. 4, 6]
10. (b)(6) (b)(3) 10 U.S. Code § 130b and (b)(6) (b)(3) 10 U.S. Code § 130b crew completed and signed a RAW prior to flight. [Encl. 5]
11. The squadron and (b)(6) (b)(3) 10 U.S. Code § 130b crew assessed the overall risk of the flight to be "Low." [Encl. 5]
12. The RAW section entitled "AIRCREW CURRENCY / PROFICIENCY FACTORS" remained incomplete. The squadron operation's section did not annotate (b)(6) (b)(3) 10 U.S. Code § 130b expired proficiency in Night Aerial Refueling on the RAW. [Encl. 5]

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13. Aircrew who have completed their initial aerial refueling training and have since expired may regain proficiency by flying with an aircraft commander who is proficient in aerial refueling. [Encl. 36]

14. (b)(6) (b)(3) 10 U.S. Code § was scheduled to regain proficiency with (b)(6) (b)(3) 10 U.S. Code § an aerial refueling instructor who was current and proficient in night aerial refueling. Training and Readiness code 2433. [Encl. 4]

15. The squadron flight schedule for 13 DEC 2016 annotated that (b)(6) (b)(3) 10 U.S. Code § 2433X (Night Aerial Refueling) event was a refresher event and properly coded as 2433R. [Encl. 4]

16. The squadron flight schedule for 13 DEC 2016 did not properly annotate that (b)(6) (b)(3) 10 U.S. Code § was to conduct code 2433 (Night Aerial Refueling Training). [Encl. 4]

17. The mission description on the squadron flight schedule for 13 DEC 2016 annotates Tiltrotor Air-Air Refueling (TAAR). [Encl. 4]

18. (b)(6) (b)(3) 10 U.S. Code § recognized the omission of code 2433 (Night Aerial Refueling Training) as an administrative error. [Encl. 7]

19. The flight was planned, briefed, and executed as a TAAR mission. [Encl. 7]

20. The squadron Operations Duty Officer (ODO) kept and maintained an accurate log of flight events before, during and after the incident involving (b)(6) (b)(3) [Encl. 25]

21. VMM-265 conducted a Standardization Board, Instrument Flight Board, and Aviation Safety council on 7 NOV 2016. [Encl. 6]

22. VMM-265's standard operating procedure for landing fuel is 1200 pounds. [Encl. 46]

C. Background and Experience of (b)(6) (b)(3) 10 U.S. Code §

23. (b)(6) (b)(3) 10 U.S. Code § completed Advanced Flight Training at Training Squadron-35 (VT-35). [Encl. 13]

24. (b)(6) (b)(3) 10 U.S. Code § was designated as a Naval Aviator on 28 February 2012. [Encl. 13]

25. (b)(6) (b)(3) 10 U.S. Code § completed aviation physiology and water survival refresher training on 7 May 2015. [Encl. 13]

26. (b)(6) (b)(3) 10 U.S. Code § earned (b)(6) (b)(3) 10 U.S. Code § Tiltrotor Aircraft Commander (TAC), Basic Instructor Pilot (BIP), Section Leader (SL), Low Altitude Training Instructor (LATI), Functional Check Pilot (FCP), Division Leader (DL), Instrument Evaluator, Crew Resource Management Facilitator (CRMF), Crew Resource Management Instructor (CRMI), Crew Resource Management Unit Level Manager (CRMULM), Night Systems Instructor (NSI), and Aerial Refueling Instructor (ARI) qualifications and designations. [Encl. 13]

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27. (b)(6) (b)(3) 10 last V-22B Naval Air Training and Operating Procedures Standardization (NATOPS) evaluation was on 28 October 2016. At that time (b)(6) had 769.7 V-22B hours and 979.4 total hours. [Encl. 13]
28. (b)(6) (b)(3) 10 last NATOPS instrument evaluation was on 18 Aug 2016. [Encl. 13]
29. No discrepancies were found with (b)(6) (b)(3) 10 NATOPS training or currency. [Encl. 13]
30. (b)(6) (b)(3) 10 had 1012.9 total flight hours. [Encl. 47]
31. (b)(6) (b)(3) 10 had 803.2 V-22B flight hours. [Encl. 47]
32. (b)(6) (b)(3) 10 had 253.9 total instrument flight hours. [Encl. 47]
33. (b)(6) (b)(3) 10 logged 65.7 flight hours in the last 90 days. [Encl. 47]
34. (b)(6) (b)(3) 10 logged 50.5 flight hours in the last 60 days. [Encl. 47]
35. (b)(6) (b)(3) 10 logged 18.6 flight hours in the last 30 days. [Encl. 47]
36. (b)(6) (b)(3) 10 was current and proficient in Training and Readiness Manual 2232 (Section CALS), 2355 (Section high light level LAT), and 2433 (Night Aerial Refueling) training codes. [Encl. 47]
37. There was no history of an aviation related mishap involving (b)(6) (b)(3) 10 prior to the 13 December 2016 mishap flight. [Encl. 13]
38. (b)(6) (b)(3) 10 was physically qualified and aeronautically adapted for unrestricted flight status. [Encl. 13]
39. (b)(6) (b)(3) 10 last flight physical was dated 30 November 2015 with an expiration date of 31 December 2016. [Encl. 13]
- D. Background and Experience of (b)(6) (b)(3) 10
40. (b)(6) (b)(3) 10 completed Advanced Flight Training at Training Squadron-35 (VT-35). [Encl. 14]
41. (b)(6) (b)(3) 10 was designated as a Naval Aviator on 31 July 2014. [Encl. 14]
42. (b)(6) (b)(3) 10 completed aviation physiology and water survival training on 23 October 2014. [Encl. 14]
43. (b)(6) (b)(3) 10 earned (b)(6) Tiltrotor Second Pilot (T2P) designation. [Encl. 14]
44. (b)(6) (b)(3) 10 last V-22B NATOPS evaluation was on 20 January 2016. At that time (b)(6) had 129.5 V-22B hours and 362.6 total hours. [Encl. 14]

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45. (b)(6) (b)(3) 10 U.S. Code § last NATOPS instrument evaluation was on 22 December 2015. [Encl. 14]
46. No discrepancies were found with (b)(6) (b)(3) 10 U.S. Code § NATOPS training or currency. [Encl. 14]
47. (b)(6) (b)(3) 10 U.S. Code § had 525.3 total flight hours. [Encl. 47]
48. (b)(6) (b)(3) 10 U.S. Code § had 290.9 V-22B flight hours. [Encl. 47]
49. (b)(6) (b)(3) 10 U.S. Code § had 156.3 total instrument flight hours. [Encl. 47]
50. (b)(6) (b)(3) 10 U.S. Code § logged 46.1 flight hours in the last 90 days. [Encl. 47]
51. (b)(6) (b)(3) 10 U.S. Code § logged 23.8 flight hours in the last 60 days. [Encl. 47]
52. 130b logged 6.9 flight hours in the last 30 days. [Encl. 47]
53. (b)(6) (b)(3) 10 U.S. Code § was current and proficient in Training and Readiness Manual 2232 section LAT training code. [Encl. 47]
54. (b)(6) (b)(3) 10 U.S. Code § was neither proficient nor current in Training and Readiness Manual 2433 Night Aerial Refueling code. [Encl. 47]
55. (b)(6) (b)(3) 10 U.S. Code § was scheduled with (b)(6) (b)(3) 10 U.S. Code § an Aerial Refueling Instructor. [Encl. 4]
56. There was no history of an aviation related mishap involving (b)(6) (b)(3) 10 U.S. Code § prior to the 13 December 2016 mishap flight. [Encl. 47]
57. (b)(6) (b)(3) 10 U.S. Code § was physically qualified and aeronautically adapted for unrestricted flight status. [NATOPS]
58. (b)(6) (b)(3) 10 U.S. Code § last flight physical was dated 7 January 2016 with an expiration date of 31 January 2017. [Encl. 14]
59. (b)(6) (b)(3) 10 U.S. Code § 130b who were both VMM-265 instructor pilots, were concerned with (b)(6) (b)(3) 10 U.S. Code § progression to aircraft commander prior to the mishap flight and felt (b)(6) (b)(3) 10 U.S. Code § needed to improve confidence, situational awareness, and decision making. [Encl. 7, 48, 56]

E. Background and Experience of (b)(6) (b)(3) 10 U.S. Code §

60. (b)(6) (b)(3) 10 U.S. Code § completed Advanced Flight Training at Training Squadron 35 (VT-35). [Encl. 15]
61. (b)(6) (b)(3) 10 U.S. Code § was designated as a Naval Aviator on 19 February 2016. [Encl. 15]
62. (b)(6) (b)(3) 10 U.S. Code § 130b completed aviation physiology and water survival training on 11 May 2016. [Encl. 15]

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63. (b)(6) (b)(3) 10 U.S. Code § 130b earned (b)(6) Tiltrotor Second Pilot (T2P), designation. [Encl. 15]
64. (b)(6) (b)(3) 10 U.S. Code § 130b last V-22B NATOPS evaluation was on 31 August 2016. At that time (b)(6) had 25.7 V-22B hours and 216.4 total hours. [Encl. 15]
65. (b)(6) (b)(3) 10 U.S. Code § 130b last NATOPS instrument evaluation was on 28 July 2016. [Encl. 15]
66. No discrepancies were found with (b)(6) (b)(3) 10 U.S. Code § 130b NATOPS training or currency. [Encl. 15]
67. (b)(6) (b)(3) 10 U.S. Code § 130b had 227.3 total flight hours. [Encl. 47]
68. (b)(6) (b)(3) 10 U.S. Code § 130b had 43.1 V-22B flight hours. [Encl. 47]
69. (b)(6) (b)(3) 10 U.S. Code § 130b had 78.2 total instrument flight hours. [Encl. 47]
70. (b)(6) (b)(3) 10 U.S. Code § 130b logged 14.4 flight hours in the last 90 days. [Encl. 47]
71. (b)(6) (b)(3) 10 U.S. Code § 130b logged 14.4 flight hours in the last 60 days. [Encl. 47]
72. (b)(6) (b)(3) 10 U.S. Code § 130b logged 14.4 flight hours in the last 30 days. [Encl. 47]
73. (b)(6) (b)(3) 10 U.S. Code § 130b was current and proficient in Training and Readiness Manual 2232 section LAT training code. [Encl. 47]
74. (b)(6) (b)(3) 10 U.S. Code § 130b was neither current nor proficient in Training and Readiness Manual 2334 single-ship High Light Level LAT nor 2335 section High Light Level LAT. [Encl. 47]
75. There was no history of an aviation related mishap involving (b)(6) (b)(3) 10 U.S. Code § 130b prior to the 13 December 2016 mishap flight. [Encl. 15]
76. (b)(6) (b)(3) 10 U.S. Code § 130b was physically qualified and aeronautically adapted for unrestricted flight status. [Encl. 15]
77. (b)(6) (b)(3) 10 U.S. Code § 130b last flight physical was dated 25 August 2016 with an expiration date of 31 September 2017. [Encl. 15]

F. Background and Experience of (b)(6) (b)(3) 10 U.S. Code § 130b

78. (b)(6) (b)(3) 10 U.S. Code § 130b completed Aircrew Flight Training at Marine Medium Tiltrotor Squadron 204. [Encl. 16]
79. (b)(6) (b)(3) 10 U.S. Code § 130b was designated as a Crew Chief on 21 November 2016. [Encl. 16]
80. (b)(6) (b)(3) 10 U.S. Code § 130b completed aviation physiology and water survival training on 17 February 2014. [Encl. 16]
81. (b)(6) (b)(3) 10 U.S. Code § 130b earned (b)(6) Basic Instructor Crew Chief designation. [Encl. 16]

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82. (b)(6) (b)(3) 10 U.S. Code § 130b last V-22B NATOPS evaluation was on 22 November 2016. At that time (b)(6) had 353.6 V-22B hours and 353.6 total hours. [Encl. 16]
83. No discrepancies were found with (b)(6) (b)(3) 10 U.S. Code § 130b NATOPS training or currency. [Encl. 16]
84. (b)(6) (b)(3) 10 U.S. Code § 130b had 381.7 total flight hours. [Encl. 47]
85. (b)(6) (b)(3) 10 U.S. Code § 130b logged 86.6 flight hours in the last 90 days. [Encl. 47]
86. (b)(6) (b)(3) 10 U.S. Code § 130b logged 31.6 flight hours in the last 60 days. [Encl. 47]
87. (b)(6) (b)(3) 10 U.S. Code § 130b logged 18.6 flight hours in the last 30 days. [Encl. 47]
88. (b)(6) (b)(3) 10 U.S. Code § 130b was current and proficient in Training and Readiness Manual 2232 section LAT and 2335 section high light level LAT training codes. [Encl. 47]
89. There was no history of an aviation related mishap involving (b)(6) (b)(3) 10 U.S. Code § 130b prior to the 13 December 2016 mishap flight. [Encl. 16]
90. (b)(6) (b)(3) 10 U.S. Code § 130b was physically qualified and aeronautically adapted for unrestricted flight status. [Encl. 16]
91. (b)(6) (b)(3) last flight physical was dated 19 September 2016 with an expiration date of 30 September 2016. [Encl. 16]

G. Background and Experience of (b)(6) (b)(3) 10 U.S. Code § 130b

92. (b)(6) (b)(3) 10 U.S. Code § 130b completed Aircrew Flight Training at Marine Medium Tiltrotor Squadron 204. [Encl. 17]
93. (b)(6) (b)(3) 10 U.S. Code § 130b was designated as a Crew Chief on 16 February 2016. [Encl. 17]
94. (b)(6) (b)(3) 10 U.S. Code § 130b completed aviation physiology and water survival training on 2 April 2015. [Encl. 17]
95. (b)(6) (b)(3) 10 U.S. Code § 130b earned (b)(6) Basic Instructor Crew Chief designation. [Encl. 17]
96. (b)(6) (b)(3) 10 U.S. Code § 130b last V-22B NATOPS evaluation was on 16 February 2016. At that time (b)(6) had 48.3 V-22B hours and 48.3 total hours. [Encl. 17]
97. No discrepancies were found with NATOPS training or currency. [Encl. 17]
98. (b)(6) (b)(3) 10 U.S. Code § 130b had 242.8 total flight hours. [Encl. 47]
99. (b)(6) (b)(3) 10 U.S. Code § 130b logged 74.4 flight hours in the last 90 days. [Encl. 47]
100. (b)(6) (b)(3) 10 U.S. Code § 130b logged 55.5 flight hours in the last 60 days. [Encl. 47]

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101. (b)(6) (b)(3) 10 U.S. Code § 130b logged 19.0 flight hours in the last 30 days. [Encl. 47]
102. (b)(6) (b)(3) 10 U.S. Code § 130b was current and proficient in Training and Readiness Manual 2232 section LAT and 2335 section high light level LAT training codes. [Encl. 47]
103. There was no history of an aviation related mishap involving (b)(6) (b)(3) 10 U.S. Code § 130b prior to the 13 December 2016 mishap flight. [Encl. 17]
104. (b)(6) (b)(3) 10 U.S. Code § 130b was physically qualified and aeronautically adapted for unrestricted flight status. [Encl. 17]
105. (b)(6) (b)(3) 10 U.S. Code § 130b last flight physical was dated 17 August 2016 with an expiration date of 31 August 2017. [Encl. 17]

H. Mishap Aircraft and VMM-265 Maintenance Practices.

106. The mishap aircraft was an MV-22B, bureau number (BuNo) 168027, assigned to VMM-265, Marine Corps Air Station Futenma, Okinawa, Japan. [Encl. 49]
107. The aircraft had 1042.3 hours logged on the airframe. [Encl. 49]
108. The aircraft was current and compliant with all pertinent technical directives. [Encl. 50]
109. The aircraft had an approved request to continue operations with a depleted Main Landing Gear Fire Suppression Bottle until a replacement became available. [Encl. 49]
110. The aircraft had an approved deferral of maintenance for corrosion on the Right Hand Aft Sponson Fairing Support. [Encl. 49]
111. All scheduled inspections were current. [Encl. 49]
112. The last major inspection at the squadron level was a phase "D" inspection completed 23 DEC 2015. [Encl. 49]
113. The most recent functional check flight was conducted on 05 DEC 2016 in order to comply with the procedures for a 30 Day No Fly inspection. [Encl. 49]
114. The result of the 05 DEC 16 Functional Check Flight was a satisfactory aircraft. [Encl. 49]
115. The aircraft had 28 open Maintenance Action Forms (MAFs) in the Aircraft Discrepancy Book. Thirteen of these MAFs were for airframes changes to be incorporated during future maintenance induction periods. The remaining 15 MAFs were written as "Up" discrepancies, meaning that the aircraft remained safe for flight with these open maintenance actions. [Encl. 49]
116. A Voice and Data Recorder, Model K (KVADR) and a Vibration, Structural Life and Engine Diagnostics System (VSLED) were installed and functioning on the MV-22B to record data which supports the maintenance functions relating to the aircraft. This system provides

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many functions of a traditional flight data recorder. This data is retrieved at the completion of the flight and analyzed by VMM-265 maintainers. [Encl. 41]

117. Analysis of recovered KVADR and VSLED data shows no evidence of a degraded state of operation or malfunction prior to 21:18:29 Japan Standard Time on 13 Dec 2016 that would contribute to DN 06's requirement to conduct an emergency water landing. [Encl. 41]

118. The aircraft was released safe for flight on 12 DEC 2016 by (b)(6) (b)(3) 10 U.S. Code § 130b [Encl. 49]

119. The aircraft was signed for by (b)(6) (b)(3) 10 U.S. Code § at 0750 13 DEC 2016 and conducted flight operations from 0830-1130 JST. [Encl. 49]

120. Upon landing at 1130, the aircraft was "hot seated," meaning it was turned over to a new aircraft commander, by (b)(6) (b)(3) 10 U.S. Code § 130b [Encl. 49]

121. (b)(6) (b)(3) 10 U.S. Code § conducted flight operations in the aircraft from 1200-1700 JST, at which time the aircraft was hot seated to (b)(6) (b)(3) 10 U.S. Code § the aircraft commander of DN06. [Encl. 49]

122. (b)(6) (b)(3) 10 U.S. Code § certified the aircraft safe for flight following (b)(6) hot seat to (b)(6) (b)(3) 10 U.S. Code § [Encl. 49]

123. All emergency egress, safety and survival equipment were up to date for scheduled inspections, and, aside from the approved deviation on the Right Hand Main Landing Gear Fire Suppression system, were in good working order. [Encl. 49]

124. (b)(5) [Encl. 51]

I. Summary of Events for the Previous 72 Hours Prior to the Day of the Mishap.

I.1 Previous 72 Hours: (b)(6) (b)(3) 10 U.S. Code § Reconstruction.

125. On 10 DEC 2016, (b)(6) (b)(3) 10 U.S. Code § was scheduled as the Fire Bucket Standby aircraft commander. The flight did not activate or launch. [Encl. 4, 7]

126. (b)(6) (b)(3) 10 U.S. Code § was not scheduled for any official duties on Sunday, 11 DEC 2016. [Encl. 4, 7]

127. (b)(6) (b)(3) 10 U.S. Code § was scheduled for an MV-22B simulator flight on 12 Dec 2016. The event was conducted as scheduled as a night training and emergency procedures event. [Encl. 4, 7]

I.2 Previous 72 Hours: (b)(6) (b)(3) 10 U.S. Code § Reconstruction.

128. On 10 DEC 2016, (b)(6) (b)(3) 10 U.S. Code § was scheduled as the Fire Bucket Standby T2P. The flight did not activate or launch. [Encl. 4, 7]

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129. (b)(6) (b)(3) 10 was not scheduled for any official duties on Sunday, 11 DEC 2016. [Encl. 4] U.S. Code §

130. (b)(6) (b)(3) 10 was scheduled for an MV-22B simulator flight on 12 Dec 2016. The event was conducted as scheduled as a night training and emergency procedures event. [Encl. 4] U.S. Code §

I.3 Previous 72 Hours: (b)(6) (b)(3) 10 U.S. Code Reconstruction.

131. On 10 DEC 2016, (b)(6) (b)(3) 10 U.S. was not scheduled for any official duties. [Encl. 4]

132. On 11 DEC 2016, Code § 130b was not scheduled for any official duties. [Encl. 4]

133. (b)(6) (b)(3) 10 U.S. Code was scheduled for an MV-22B simulator flight on 12 Dec 2016. The event was conducted as scheduled as a night training and emergency procedures event. [Encl. 4]

I.4 Previous 72 Hours: (b)(6) (b)(3) 10 U.S. Code § 130b Reconstruction.

134. On 10 DEC 2016, was not scheduled for any official duties. [Encl. 4]

135. On 11 DEC 2016, was not scheduled for any official duties. [Encl. 4]

136. On 12 DEC 2016, was scheduled for and executed a routine daytime training sortie. This flight departed Futenma at approximately 1000 JST, and landed at 1300 JST. [Encl. 4]

I.5 Previous 72 Hours: (b)(6) (b)(3) 10 U.S. Code § 130b Reconstruction.

137. On 10 DEC 2016, was not scheduled for any official duties. [Encl. 4]

138. On 11 DEC 2016, was not scheduled for any official duties. [Encl. 4]

139. On 12 DEC 2016, was not scheduled for any official duties. [Encl. 4]

J. Mishap Flight.

J.1 Event Overview.

140. DN05 and DN06 were scheduled to conduct a routine, night training mission in the vicinity of Okinawa, Japan. The flight's mission included conducting LAT training near Amami Jima, night landing training in the Central Training Area (CTA), and night Tiltrotor Aerial Refueling (TAAR) training to the northeast of Okinawa. [Encl. 4]

J.2. Preflight Briefing and Ground Operations on 13 Dec 2016.

141. (b)(6) (b)(3) 10 U.S. Code § arrived at the squadron spaces at approximately 1300 JST. [Encl. 7]

142. (b)(6) (b)(3) 10 U.S. Code § arrived at the squadron spaces at approximately 1300 JST. [Encl. 8]

143. (b)(6) (b)(3) 10 U.S. Code arrived at the squadron spaces at approximately 1300 JST. [Encl. 45]

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144. (b)(6) (b)(3) 10 U.S. Code § 130b arrived at the squadron spaces at approximately 1300. [Encl. 10]
145. (b)(6) (b)(3) 10 U.S. Code § 130b arrived at the squadron spaces at approximately 1420 JST. [Encl. 9]
146. All crewmembers stated they felt normal, were not suffering from any abnormal stressors, and felt prepared for the flight. [Encl. 7, 8, 9, 10, 45]
147. The flight brief was given at approximately 1500 JST by (b)(6) (b)(3) 10 U.S. Code § 130b Tiltrotor Aircraft Commander of DN 05, and the section leader designated on the flight schedule. [Encl. 4, 7, 8, 9, 10, 45]
148. The briefed forecast reflected northerly winds ranging from 15-20 knots, and a cloud layer of Few-Scattered at 2000 feet above ground level (AGL). [Encl. 42]
149. The official Department of Defense Form 175-1, Flight Weather Brief, forecasted light to moderate turbulence in clear air, with northwesterly winds at 13 gusting to 20 knots. [Encl. 56]
150. The weight and power computation was properly completed, and the document was signed by (b)(6) (b)(3) 10 U.S. Code § 130b [Encl. 42]
151. The Risk Assessment worksheet was completed and signed by (b)(6) (b)(3) 10 U.S. Code § 130b and assigned an overall rating of "Low Risk." The Aircrew Currency / Proficiency Factors section was left blank. [Encl. 5]
152. (b)(6) (b)(3) 10 U.S. Code § 130b identified no unacceptable risks, and identified the riskiest portion of the mission to be Night Low Altitude Training which was mitigated by having a Night Systems Instructor Pilot (b)(6) (b)(3) 10 U.S. Code § 130b as a crewmember. [Encl. 5]
153. The crew of the C-130 refueling tanker, callsign Jackal 11 (JL11), and DN06 agreed on a 30 minute delay from the planned start of aerial refueling training. [Encl. 7, 48]
154. (b)(6) (b)(3) 10 U.S. Code § 130b acknowledges omissions in codes on the VMM-265 flight schedule. The night aerial refueling code 2433X were not present for the aircraft commanders, but were present for copilots. [Encl. 7]
155. (b)(6) (b)(3) 10 U.S. Code § 130b did the majority of the planning and coordination with the C-130's because (b)(6) (b)(3) 10 U.S. Code § 130b was the section lead. (b)(6) (b)(3) 10 U.S. Code § 130b received the information required to execute the flight during the brief. [Encl. 7, 48]
156. Despite the fact that Operations had neglected to annotate the proper codes for (b)(6) (b)(3) 10 U.S. Code § 130b the flight crew knew aerial refueling was a specified task for the flight that evening. [Encl. 7]
157. The flight brief was executed at the scheduled time. (b)(6) (b)(3) 10 U.S. Code § 130b delivered the section brief. The overall plan was to depart Futenma, proceed to Amami Island for LAT, and return to Okinawa for confined area landings until the Aerial Refueling Commencement Time (ARCT). DN05 and DN06 would then conduct aerial refueling training prior to returning to Futenma. [Encl. 7, 48]

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158. The planned ARCT was 2030, 2100 became the new ARCT upon coordination between DN05, DN06, and JL11. [Encl. 7, 48]

159. Post brief, DN06's crew conducted a NATOPS by-exception brief in (b)(6) (b)(3) 10 U.S. Code § office. [Encl. 7, 48]

160. DN06's copilot, (b)(6) (b)(3) 10 U.S. Code § had last conducted Night Aerial Refueling Nov 23 2015. This flight was refresher training. In preparation (b)(6) (b)(3) 10 U.S. Code § directed (b)(6) (b)(3) 10 U.S. Code § to review Emergency and Aerial refueling procedures. [Encl. 7]

161. Most of (b)(6) (b)(3) 10 U.S. Code § instructional Training and Readiness discussion was dedicated to (b)(6) (b)(3) 10 U.S. Code § Night Systems flight training. [Encl. 7]

162. After the brief, DN06's crew took about 30 mins of time for a meal. (b)(6) (b)(3) 10 U.S. Code § then reviewed the Aircraft Discrepancy Book, and the crew checked out their flight gear to make a 1710 hot seat time. [Encl. 7]

163. The aircraft was transferred to (b)(6) (b)(3) 10 U.S. Code § 130b as scheduled. The outgoing crew discussed the state of the aircraft with (b)(6) (b)(3) 10 U.S. Code § crew and reported no significant issues. [Encl. 7]

164. (b)(6) (b)(3) 10 U.S. Code § conducted the aircraft walk around inspection during the hot seat procedures. [Encl. 7]

165. Prior to takeoff, DN05 and DN06 taxied together to the station fueling area and refilled both aircraft. [Encl. 7]

166. After refueling, the flight continued to taxiway "C" for takeoff. [Encl. 7]

167. During the taxi, (b)(6) (b)(3) 10 U.S. Code § noticed and notified DN05 that their aircraft appeared to be leaking fuel. [Encl. 7]

168. The fuel leak was visually confirmed by (b)(6) (b)(3) 10 U.S. Code § 130b crew. The flight taxied back to the VMM-265 parking area. [Encl. 7]

169. VMM-265 maintainers examined the issue, and reported that it was a valve that would close once airborne. [Encl. 7]

170. Weather at the time of departure was 2000-2500 ft with a scattered to broken layer of clouds. [Encl. 7]

171. DN05 and DN06 took off at approximately 18:17 JST. [Encl. 7, 41]

172. Prior to passing Hedo Point DN05 and DN06 donned night vision goggles, due to the fact that the End of Evening Nautical Twilight was forecasted to have illumination of 98% under High Light Level conditions (EENT). [Encl. 4, 7, 19]

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173. DN06 flight faced strong headwind of 20-25 knots in transit to Amami island and encountered a scattered layer of clouds between 2000-2500ft. [Encl. 7]

174. At Amami island, the lowest clouds were touching the approximately 2800 foot high terrain on Amami island. DN06 experienced light to moderate turbulence and stiff winds of 20-25 knots from the north. [Encl. 7]

175. DN05 and DN06 entered the Amami LAT route in spread formation. Halfway through the route, (b)(6) (b)(3) 10 U.S. Code § 130b put DN06 in the lead. [Encl. 7]

176. (b)(6) (b)(3) 10 U.S. Code § 130b in DN05 reported a minor aircraft issue. (b)(6) (b)(3) 10 U.S. Code § 130b left DN06 to troubleshoot the problem at higher altitude. DN05 decided to return as a single aircraft and recovered back to Futenma without incident. [Encl. 7]

177. While DN05 troubleshooted their aircraft issue, DN06 flew the Amami LAT route at 500ft and 240 knots. [Encl. 7]

178. (b)(6) (b)(3) 10 U.S. Code § 130b limited (b)(6) (b)(3) 10 U.S. Code § 130b student (b)(6) (b)(3) 10 U.S. Code § 130b to 85% torque and slowed to 220 knots due to turbulence. (b)(6) (b)(3) 10 U.S. Code § 130b instructed (b)(6) (b)(3) 10 U.S. Code § 130b to conduct a less aggressive flight profile. [Encl. 7]

179. The turbulent air penetration speed for the MV-22B is 220 knots. [Encl. 53]

180. DN06 experienced worsening weather to the north of the island. [Encl. 7]

181. (b)(6) (b)(3) 10 U.S. Code § 130b and (b)(6) (b)(3) 10 U.S. Code § 130b had good crew resource management while conducting their training at Amami Island. [Encl. 7, 45]

182. (b)(6) (b)(3) 10 U.S. Code § 130b was in the cabin during this evolution. [Encl. 7, 8]

183. DN06's crew reported significantly less turbulence on the return to Okinawa at an altitude of 5500ft MSL. [Encl. 7]

184. DN06 descended to 1500ft around Hedo Point to maintain Visual Flight Rules and ensure cloud clearance. [Encl. 7]

185. Continuing south, DN06 was abeam Hedo Point at approximately 2000, remaining several miles offshore. [Encl. 7, 41]

186. While waiting for the ARCT, DN06 conducted single aircraft landings in (b)(3) Statute 455 10 U.S. Code § 455. [Encl. 7, 41]

187. (b)(6) (b)(3) 10 U.S. Code § 130b had the controls for the first several landings. [Encl. 7]

188. DN06 conducted a Hot Seat, replacing (b)(6) (b)(3) 10 U.S. Code § 130b with (b)(6) (b)(3) 10 U.S. Code § 130b as the copilot, in the landing zone. [Encl. 7]

189. (b)(6) (b)(3) 10 U.S. Code § 130b executed multiple (5-6) confined area landings in (b)(3) Statute 455 as a warm up upon taking the aircraft controls. [Encl. 7]

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190. DN06 departed (b)(3) Statute 455 on timeline to meet the aerial refueling join time (ARCT) with JL 11. [Encl. 7, 41]
191. (b)(6) (b)(3) 10 (b)(3) Statute 455 executed the After Takeoff and Aerial Refueling checklists upon departure from (b)(3) Statute 455 [Encl. 7, 8]
192. JL11 directed DN06 to join the C-130 in left observation position. [Encl. 7]
193. DN06 joined up in tanker formation with JL11 at 1500-1800 feet of altitude as planned. [Encl. 7]
194. (b)(6) (b)(3) 10 U.S. Code § passed controls to (b)(6) (b)(3) 10 U.S. prior to the first attempt at aerial refueling. [Encl. 7, 8]
195. DN06 and JL11 conducted training at 1500-1800 feet, and the minimum authorized altitude for aerial refueling operations is 500 feet. [Encl. 11]
196. There are no MV-22 aircraft limitations or restrictions associated with conducting aerial refueling at lower altitude. [Encl. 53]
197. Weather for aerial refueling was assessed to be scattered to broken clouds at 2000-2500 feet' AGL. Winds were out of the north 20-30 knots based on MV-22 instrumentation. [Encl. 7, 8]
198. JL11's aerial refueling drogue, the aerodynamic receptacle shaped like a basket which is deployed by the C-130 to aircraft needing refueling, was oscillating approximately 10-15 feet in the vertical and 5-10 feet in the lateral. [Encl. 7, 8]
199. JL11 was at 1800 feet altitude travelling at 200 Knots Indicated Airspeed based on C-130J instrumentation during refueling. [Encl. 29, 30, 31]
200. The standard High Speed Drogue was employed by JL11 for the aerial refueling training. [Encl. 7, 8]
201. (b)(6) (b)(3) 10 U.S. Code § held a stable left observation position. [Encl. 7]
202. DN06's crew received a Green light from JL11 using the multicolored light system. [Encl. 7, 8]
203. A green light clears a receiver from the observation to the pre-contact position, directly behind the tanker. (b)(6) (b)(3) 10 U.S. Code § held the pre-contact position for a longer time than standard to assess the conditions. [Encl. 7, 8]
204. (b)(6) (b)(3) 10 U.S. Code § experienced multiple failed attempts to connect the fuel probe with the high speed drogue, and passed the controls to (b)(6) (b)(3) 10 U.S. Code § DN06 received a Bingo Fuel caution at 21:09:20 JST. This caution alerts the aircrew that they must execute an immediate direct flight back to their destination airfield in order to land with the desired landing fuel [Encl. 7, 8, 41]

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205. In response to the Bingo Fuel Caution, DN06 requested the C-130 turn to the south so that they were headed closer to Futenma. (b)(6) (b)(3) 10 U.S. Code § moved the aircraft to the observation position so that the C-130 could turn southbound. [Encl. 7, 8, 41]

206. DN06 decided to continue to try to plug in order to increase fuel state while they were headed toward Futenma as they otherwise would have landed below the squadron standard of 1200 pounds, but above aircraft NATOPS minimums of 300 pounds per feed tank. [Encl. 7]

207. Basket movement remained the same as northbound with 10-15 foot swings in the vertical axis. [Encl. 7, 8]

208. After 4-5 attempts to connect the fuel probe to the High Speed Drogue basket, (b)(6) (b)(3) 10 U.S. Code § continued to attempt to aerial refuel for (b)(6) (b)(3) 10 U.S. Code § own training, as well as a desire to increase the aircraft's fuel state. [Encl. 7, 8]

209. The crew of the tanker, call sign JL 11, noticed DN06's control inputs were increasingly aggressive. [Encl. 27, 28, 29]

210. The established technique for moving to the contact position is to confirm alignment with the drogue then increase power to affect 2 to 5 knots closure straight ahead. The pilot at the controls should focus on flying stable formation on the tanker, avoiding aircraft over control, and referencing but not staring at the basket. The pilot should note the power setting required to maintain a stable astern position for use as a baseline. The pilot should then use approximately a 5% of differential from the baseline power setting for corrections to close with or back away from the basket. [Encl. 12]

211. The Flight Data shows control inputs by (b)(6) (b)(3) 10 U.S. Code § increased in amplitude, ranging from 20-85% torque. [Encl. 7, 8, 41]

212. (b)(6) (b)(3) 10 U.S. Code § recalled mast torque required to hold a stable astern position to be between 60-66%. [Encl. 7, 45]

213. At time 21:08:08, Flight Data shows the right gear box momentarily lost pressure. This error code subsequently cleared. [Encl. 41]

214. (b)(6) (b)(3) 10 U.S. Code § attempted to connect the fuel probe to the High Speed Drogue basket one last time. The basket dipped low and then high and right. [Encl. 7]

215. At time 21:18:29, Flight Data showed (b)(6) (b)(3) 10 U.S. Code § made a power input equivalent to 3.7 inches (92%) with an immediate reduction to 0 inches. [Encl. 41, 54]

216. The large 3.7 inch amplitude power input was applied and corrected near instantaneously. [Encl. 41, 54]

217. The MV-22's recommended closure rate for aerial refueling is nominally 2-5 knots. [Encl. 12]

218. Flight data shows that DN06's airspeed was in a range of 198-205 knots. [Encl. 41, 54]

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219. The airspeed of JL11, the tanker C-130, was 200 knots. [Encl. 29, 30, 31]

220. (b)(6) (b)(3) 10 U.S. Code § removed all power input, but was unable to arrest the closure rate. The drogue went high and right, DN06 felt contact with the right prop. [Encl. 7]

221. At 21:18:29, coincident with the large power reduction, the aircraft posted RPM LOW. [Encl. 41, 54]

222. DN06 felt the prop breaking up, and experienced a right turning moment due to asymmetric thrust to the right. The aircraft entered into a large amplitude, descending right hand turn. [Encl. 7]

223. By 21:18:35 JST the aircraft declared a loss of oil pressure to the Left Tilt-axis Gear Box and the Right Proprotor Gear Box , which both subsequently reset. [Encl. 41, 54]

224. The Left Engine control computer A posted a failure at 21:18:39 which remained for the duration of the flight, and triggered Left Engine Control Degraded and Left Engine Oil Level Low cautions. The redundant Left Engine control computer B assumed control of the left engine, resulting in no reduction in engine control. [Encl. 41, 54]

225. DN06 heard a breakaway call from JL11. This directive means to execute an immediate termination of aerial refueling and to maneuver away from the tanker. [Encl. 7]

226. (b)(6) (b)(3) 10 U.S. Code § 1320b closed the door between the cabin and the cockpit. While (b)(6) was strapping into (b)(6) seat, (b)(6) heard a gasp from (b)(6) (b)(3) 10 U.S. Code § (b)(6) [Encl. 7]

227. (b)(6) (b)(3) 10 U.S. Code § made a mayday call over the aerial refueling communications frequency. [Encl. 7]

228. (b)(6) (b)(3) 10 U.S. Code § asked (b)(6) (b)(3) 10 U.S. Code § to make a call over guard. (b)(6) was holding (b)(6) helmet and (b)(6) was not responding to queries, and was having difficulties with (b)(6) cockpit intercommunication system. [Encl. 7, 8]

229. (b)(3) 10 USC 130 [Encl. 41, 54, 53]

230. (b)(3) 10 USC 130 [Encl. 53]

231. (b)(3) 10 USC 130
(b)(3) 10 USC 130
present. [Encl. 53]

232. DN06's crew found it difficult to read aircraft instrumentation and maintain balanced flight due to high vibrations. [Encl. 7, 8]

233. (b)(6) (b)(3) 10 U.S. Code § saw guard was still not the active frequency and selected frequency 243.0 (GUARD) and made a MAYDAY call. [Encl. 7]

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234. DN06 began losing altitude going from 1800 to 1200 ft (AGL), and accelerating as high as 245 knots before (b)(6) (b)(3) 10 U.S. Code was able to level off and slow the airspeed. [Encl. 41, 54, 53]

235. DN06 decided to remain in airplane mode because (b)(6) (b)(3) 10 U.S. Code § did not want to further exacerbate the asymmetric thrust. [Encl. 7]

236. At the time of the drogue impact, DN06 was within 8 nautical miles of Yoron Airfield. [Encl. 7, 55]

237. The crew of DN06 did not realize their location in proximity to Yoron airfield. [Encl. 7, 55]

238. DN06 continued south, and reached Hedo Point at approximately 21:21:00 JST. [Encl. 41, 54]

239. At 21:21:17 JST, The Right Engine Control Computer A posted failure, remained for the duration of the flight, and triggered Right Engine Control Degraded and Right Engine Oil level low cautions. The redundant Right Engine Control Computer B assumed control of the right engine, resulting in no reduction in engine control. [Encl. 41, 54]

240. At 21:21:34 JST, Flight Data indicated the right feed tank posted a caution indicating fuel state was low followed by another caution indicating the left feed tank was low at 21:22:20. DN06 had 1600 lbs of fuel remaining with under 520 lbs in each feed tank. [Encl. 41, 54]

241. DN06's pilots did not complete the post aerial refueling checklist, rendering the boost pumps inoperative, preventing extra fuel in the sponson tanks from reaching the feed tanks for eventual consumption. [Encl. 41, 54, 33]

242. Upon reaching Okinawa, DN06 followed the coastline in order to avoid flying over people and property. DN06 maintained level flight at approximately 170-200 knots and 1000 feet. [Encl. 41, 54, 33]

243. DN06 made contact with a flight of 2 Marine Corps CH-53Es that were conducting flight operations in the Northern Training Area. DN06 requested that they join on (b) and advise (b) of (b) altitude because it was difficult to read (b) gauges. [Encl. 7] (b) (b) (b)

244. After continuing southbound another 4-5 nautical miles DN06 maintained 200 knots, and had descended to 500 feet. [Encl. 41, 54, 33]

245. Generator 2 FAIL caution posted at approximately 21:24:00 JST, this generator is located in the right nacelle. [Encl. 41, 54]

246. At 21:24:50, Rudder and Elevator fault posted, followed by Hydraulic System 2 Leak caution at 21:25:00. [Encl. 41, 54]

247. The aircraft self-isolated hydraulic system number 2 based on system software logic. With this system isolated, hydraulic power to the right nacelle as well as the elevator are backed up by

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a redundant system. The right rudder has no redundant hydraulic power, and aligned with the slipstream of the aircraft. [Encl. 33, 53]

248. Continuing southbound, at 21:25:00 DN06 accelerates to approximately 230 knots while maintaining greater than 500 feet of altitude. [Encl. 41, 54]

249. At 21:25:33, Flight Data indicated the left inboard flaperon failed. [Encl. 41, 54]

250. (b) (3) 10 USC 130 [Encl. 53]

251. The post-mishap engineering assessment determined that the Left Inboard Flaperon remained functioning, and responded to commands up until impact with the water. [Encl. 33]

252. At 21:26:30 DN06 airspeed began to decay while the aircraft was at an altitude of 300-500ft (AGL) in the vicinity of local flying checkpoint (b)(3) Statute 455 10 U.S. Code [Encl. 41, 54]

253. Noting (b) altitude and airspeed decay, (b)(6) (b)(3) 10 U.S. Code § attempted to increase power in an attempt to maintain level flight. [Encl. 7]

254. DN06 gained airspeed but was unable to maintain altitude. Increased power application increased the level of asymmetric thrust [Encl. 7]

255. (b)(6) (b)(3) 10 U.S. Code § maintained aircraft control by decreasing (b) (6) power input. [Encl. 7]

256. At 21:27:41 the aircraft declares the right nacelle blower failed. This component is responsible for maintaining nacelle and transmission temperatures in normal operating ranges. [Encl. 41, 54]

257. At 21:28, altitude and airspeed continue to decay. At this time, DN06's altitude was approximately 200 feet (AGL) and was traveling at 145 knots between Goat Island (N 26 31.56, E 128 05.53) and Okinawa. [Encl. 41, 54]

258. DN06's crew did not recall hearing the radar altimeter go off. [Encl. 7]

259. At 21:28 DN06 sets up for a landing profile, power is reduced and applied as required to maintain control while executing a controlled descent and allowing airspeed to decay. [Encl. 7, 41, 54]

260. The crew of DN06, in aircraft 168027, executed an emergency water landing at approximately 21:29:00 JST. [Encl. 41, 54]

K. Post-Mishap and Search and Rescue

261. The crew did not recall performing an emergency engine shutdown. [Encl. 7, 8]

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
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2016 OFF THE COAST OF OKINAWA, JAPAN

262. Following impact, (b)(6) (b)(3) 10 U.S. Code § saw that (b)(6) (b)(3) 10 U.S. Code § was bleeding from a head injury. [Encl. 8]

263. (b)(6) (b)(3) 10 U.S. Code § actuated the escape cartridge on the aircraft's right side window next to (b)(6) (b)(3) 10 U.S. Code § then helped (b)(6) (b)(3) 10 U.S. Code § get out of (b)(6) seat and pushed (b)(6) but while (b)(6) (b)(3) 10 U.S. Code § pulled (b)(6) out the window. [Encl. 7, 8]

264. The cockpit was turned 90 degrees from the rest of the aircraft. The right nacelle and mid wing seemed to be parallel to the empennage, and the left wing was not in sight. The right prop rotor was broken off almost at the hub. [Encl. 7, 8]

265. (b)(6) (b)(3) 10 U.S. Code § first memory is being on top of the aircraft as (b)(6) (b)(3) 10 U.S. Code § was removing (b)(6) helmet in order to try to stop the bleeding. [Encl. 7, 8]

266. The probe was still extended so (b)(6) (b)(3) 10 U.S. Code § used that to help (b)(6) get down. (b)(6) checked on the crew chiefs. [Encl. 7, 8]

267. Near simultaneously, (b)(6) (b)(3) 10 U.S. Code § inflated (b)(6) right LPU when (b)(6) got out of the bird because (b)(6) did not know the depth of the water. [Encl. 9]

268. On egress, (b)(6) (b)(3) 10 U.S. Code § realized (b)(6) was in water that was only 3 feet deep. [Encl. 9]

269. (b)(6) (b)(3) 10 U.S. Code § actuated the right cockpit window escape device while (b)(6) (b)(3) 10 U.S. Code § was near the fuel probe. [Encl. 9]

270. (b)(6) (b)(3) 10 U.S. Code § heard (b)(6) (b)(3) 10 U.S. Code § and proceeded towards (b)(6) voice. (b)(6) picked up a piece of the aircraft that (b)(6) (b)(3) 10 U.S. Code § was strapped to and freed (b)(6) [Encl. 9]

271. (b)(6) (b)(3) 10 U.S. Code § had a gash on (b)(6) eyebrow and was not walking well. [Encl. 9]

272. (b)(6) (b)(3) 10 U.S. Code § saw that (b)(6) (b)(3) 10 U.S. Code § could not remember things and was experiencing memory loss. [Encl. 9]

273. (b)(6) (b)(3) 10 U.S. Code § had a hard time breathing, coughed up blood, and relayed to (b)(6) (b)(3) 10 U.S. Code § that (b)(6) was losing some feeling in (b)(6) arm. [Encl. 9]

274. (b)(6) (b)(3) 10 U.S. Code § turned on (b)(6) strobe light. Two Warhorse CH-53Es above saw this signal and (b)(6) (b)(3) 10 U.S. Code § told the other people to turn on their strobes. [Encl. 9]

275. (b)(6) (b)(3) 10 U.S. Code § checked on (b)(6) (b)(3) 10 U.S. Code § and (b)(6) (b)(3) 10 U.S. Code § explained (b)(6) was fine, and described (b)(6) (b)(3) 10 U.S. Code § injuries. [Encl. 9]

276. The two Warhorse CH-53Es and other aircraft were flying over the mishap site. The Push to Talk (PTT) feature on (b)(6) (b)(3) 10 U.S. Code § survival radio worked immediately. (b)(6) talked to them and told them they had 5 people, 2 injured. [Encl. 8]

277. (b)(6) (b)(3) 10 U.S. Code § removed (b)(6) (b)(3) 10 U.S. Code § helmet and applied pressure on (b)(6) head lacerations. (b)(6) (b)(3) 10 U.S. Code § was conscious and communicating at this time. [Encl. 7, 8]

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
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278. (b)(6) (b)(3) employed (b)(6) cell phone to call (b)(6) (b)(3) 10 U.S. Code § 130b at the squadron headquarters. (b)(6) relayed the current situation, and let (b)(6) know that everyone was out of the aircraft and alive. [Encl. 45]

279. The Warhorse CH-53E's threw a life raft to the crew, (b)(6) (b)(3) 10 U.S. Code § 130b went to get the first aid kit out of the raft and then threw it to (b)(6) (b)(3) 10 U.S. Code for use in providing first aid to (b)(6) (b)(3) 10 U.S. Code [Encl. 9]

280. The first aid kit remained unused, as pressure was kept on (b)(6) (b)(3) 10 U.S. Code § head using a shirt. [Encl. 7, 8]

281. (b)(6) (b)(3) 10 U.S. Code § continued to employ the PTT on (b)(6) survival radio to communicate with rescue personnel. [Encl. 7, 8]

282. (b)(6) (b)(3) 10 U.S. Code § directed (b)(6) (b)(3) 10 U.S. Code § 130b and (b)(6) (b)(3) 10 U.S. Code § to move to the front of the aircraft for rescue. [Encl. 9]

283. (b)(6) (b)(3) 10 U.S. Code § inflated (b)(6) (b)(3) 10 U.S. Code § LPU to float (b)(6) to where (b)(6) was trying to get to a dry spot to wait for assistance. [Encl. 9]

284. At approximately 22:57:00 JST a United States Air Force HH-60 rescue helicopter, call sign Jolly 11, arrived on scene, delivering rescue personnel. [Encl. 25]

285. One of the rescue personnel checked on the aircrew and the other went to check on the pilots. [Encl. 9]

286. The crew of the HH-60 picked up (b)(6) (b)(3) 10 U.S. Code § first with a rescue stop, then (b)(6) (b)(3) 10 U.S. Code § [Encl. 9]

287. (b)(6) (b)(3) 10 U.S. Code § told them to take (b)(6) (b)(3) 10 U.S. Code § first, because (b)(6) (b)(3) 10 U.S. Code § had more substantial injuries than the rest of the crew. [Encl. 9]

288. Jolly 11 extracted (b)(6) (b)(3) 10 U.S. Code § and (b)(6) (b)(3) 10 U.S. Code § at approximately 23:02 JST bringing them to the hospital on Camp Foster. (b)(6) (b)(3) 10 U.S. Code § suffered only minor injuries to include lacerations and contusions. (b)(6) (b)(3) 10 U.S. Code § suffered a punctured lung, as well as other less severe injuries. [Encl. 25]

289. Jolly 11's rescue personnel moved the DN06 pilots off of the aircraft. They lowered (b)(6) (b)(3) 10 U.S. Code § into a rescue litter. [Encl. 7, 8, 9]

290. (b)(6) (b)(3) 10 U.S. Code § was recovered to the HH-60 in the litter via a rescue basket. [Encl. 25]

291. (b)(6) (b)(3) 10 U.S. Code § was laid on a stretcher in the HH-60 and received medical treatment for (b)(6) (b)(3) 10 U.S. Code § injuries. [Encl. 25]

292. (b)(6) (b)(3) 10 U.S. Code § was hoisted with a rescue stop, followed by (b)(6) (b)(3) 10 U.S. Code § [Encl. 7, 8]

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
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293. The HH-60 departed the wreckage site and went to the Camp Foster Naval Hospital at approximately 23:58:00 JST near N 26°32'16.5" E 128°06'05.3". (b)(6) (b)(3) 10 fractured (b)(6) (b)(3) 10 leg, and suffered multiple lacerations and contusions. (b)(6) (b)(3) 10 and (b)(6) (b)(3) 10 suffered minor injuries to include lacerations and contusions. [Encl. 25] U.S. Code § 10 U.S. Code

M. Engineering analysis and determinations.

294. Recovered flight data shows that no pre-existing aircraft malfunction existed prior to the drogue strike. [Encl. 41]

295. Following the drogue strike there was a clear aerodynamic imbalance between the thrust forces of the right and left rotors. [Encl. 33, 41]

296. After striking the drogue, DN06, Aircraft 168027 flew approximately 35nm over 11 minutes of flight. [Encl. 33, 41, 54]

297. The thrust asymmetry was balanced with pilot rudder inputs of 1.5-1.7 inches of deflection. This value, when combined with known aerodynamic characteristics of a healthy rotor system, is significant in that it shows that the imbalance in the rotor system was on the order of 30% degradation from the right and left rotor. [Encl. 33, 41, 54]

298. Aircraft 168027 was a controllable aircraft in Airplane mode up to the point that the right rudder failed. At this point balanced flight was no longer achievable and in this condition posed the same risks as the water landing. [Encl. 33, 41, 54]

299. Engineers conducted a comparative analysis with a similar MV-22 drogue strike which occurred in 2015 on aircraft BuNo 167917. In this incident the aircrew converted and made a successful vertical landing. [Encl. 33, 41, 54]

300. In the 2015 incident, the drogue impacted a single rotor blade with only minor surface damage to the other blades. [Encl. 33]

301. In the 2015 incident, the pilot maintained balanced flight in airplane mode without significant rudder inputs. By comparison to the 2015 incident, DN06 had peak amplitude accelerations that were three times greater in magnitude leading to the engineer conclusion that DN06 had much more of the right rotor effective area missing. [Encl. 33]

302. Accelerometer data shows that DN06's aircraft experienced three times the vibrations and a far worse condition with respect to the amount of damage to the rotor system than the 2015 comparison. [Encl. 33]

303. The Engineers who conducted the comparative analysis could not determine whether or not DN06 could have successfully converted and accomplished a safe vertical or roll on landing given the amount of rotor damage sustained. [Encl. 33]

304. The HYD 2 LEAK Caution resulted in an associated RUDDER FAULT caution at approximately 2125 JST. [Encl. 33, 41, 54]

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305. Flight data shows normal operation of both rudders until the RUDDER FAULT posted at approximately 2125 JST. [Encl. 33, 41, 54]

306. When RUDDER FAULT posted, the right rudder aligned with the slipstream and no longer responded to pilot inputs. [Encl. 33]

307. The left rudder continued to operate normally. [Encl. 33]

308. (b) (3) 10 USC 130

[Encl. 53]

309. Prior to RUDDER FAULT posting, thrust asymmetry was only balanced with near full pilot rudder inputs of 1.5-1.7 inches of deflection. [Encl. 33, 41, 54]

310. Losing the operation of the right rudder significantly reduced the ability of DN06 to counter the asymmetric thrust created by the damage to the right rotor. [Encl. 33]

Opinions

(b) (5)

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
OSPREY OF MARINE MEDIUM TILTROTOR SQUADRON 265 ON 13 DECEMBER
2016 OFF THE COAST OF OKINAWA, JAPAN

(b) (5)



Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
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(b) (5)



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(b) (5)



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OSPREY OF MARINE MEDIUM TILTROTOR SQUADRON 265 ON 13 DECEMBER
2016 OFF THE COAST OF OKINAWA, JAPAN

(b) (5)



Recommendations

(b) (5)



(b)(6) (b)(5) TO U.S. Code § 1350





UNITED STATES MARINE CORPS
1ST MARINE AIRCRAFT WING
UNIT 37101
FPO AP 96373-7101

IN REPLY REFER TO:
5830
CG
14 JUN 2017

FIRST ENDORSEMENT on (b)(6) (b)(3) 10 U.S. Code § 1tr 5830 of 28 April 17

From: Commanding General, 1st Marine Aircraft Wing
To: Commanding General, III Marine Expeditionary Force

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
OSPREY OF MARINE MEDIUM TILTROTOR SQUADRON 265 ON 13 DECEMBER
2016 OFF THE COAST OF OKINAWA, JAPAN

1. Readdressed and forwarded. (b) (5)
[REDACTED]
2. (b) (5)
(b) (5)
[REDACTED]
3. (b) (5)
(b) (5)
[REDACTED]
4. My point of contact for this matter is the 1st Marine Aircraft Wing Staff Judge Advocate,
(b)(6) (b)(3) 10 U.S. Code § 130b at (b)(6) (b)(3) 10 U.S. Code § 130b
(b) (6) b (3) 10 USC 130b
[REDACTED]

Copy to:
CO MAG-36
DOSS
AC/S G-3
File



UNITED STATES MARINE CORPS

III MARINE EXPEDITIONARY FORCE

UNIT 35601

FPO AP 96382-5601

IN REPLY REFER TO:

5830

CG

JUN 29 2017

SECOND ENDORSEMENT on (b) (6) b (3) 10 tr 5830 of 28 April 17
USC 130b

From: Commanding General, III Marine Expeditionary Force

To: File

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
OSPREY OF MARINE MEDIUM TILTROTOR SQUADRON 265 ON 13 DECEMBER
2016 OFF THE COAST OF OKINAWA, JAPAN

1. Readdressed and closed.

2. (b) (5)

(b) (5)

3. (b) (5)

(b) (5)

4. (b) (5)

(b) (5)

5. The actions of the United States Air Force HH-60 and United States Marine Corps CH-53 rescue crews are laudable. The rescue crew's quick life-saving actions reflect their dedication and professionalism.

(b) (6) b (3) 10 USC 130b

Copy to:

DC, AVN

COMMARFOPAC

CG, 1st MAW

CO, MAG-36

DOSS

AC/S G-3

File



UNITED STATES MARINE CORPS
1ST MARINE AIRCRAFT WING
UNIT 37101
FPO AP 96373-7101

IN REPLY REFER TO:

5830

CG

16 DEC 2016

From: Commanding General, 1st Marine Aircraft Wing

To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
OSPREY OF MARINE MEDIUM TILT-ROTOR SQUADRON 265 ON 13
DECEMBER 2016 OFF THE COAST OF OKINAWA, JAPAN

Ref: (a) JAGINST 5800.7F (JAGMAN)

1. This letter appoints you, pursuant to chapter II of the reference, to inquire into the facts and circumstances surrounding the Class A aviation mishap involving the Class A aviation mishap involving the MV-22 Osprey of Marine Medium Tilt-rotor Squadron that occurred on 13 December 2016 off the coast of Iwakuni, Japan. This Command Investigation is convened to investigate the circumstances surrounding a Class A aviation mishap in compliance with 10 U.S.C. § 2255.
2. You are directed to investigate the cause of the mishap, resulting injuries and damages, and any fault, neglect, or responsibility therefore, and recommend appropriate administrative or disciplinary action as appropriate, to include line of duty/misconduct determinations. Report your findings of fact, opinions, and recommendations in writing, via letter form, within sixty (60) days from the date of this appointing order, unless an extension of time is granted. If you have not previously done so, read chapter II of reference (a) in its entirety before beginning your investigation.
3. This investigation is your primary duty and takes precedence over your regularly assigned duties until complete. You are directed to consult with a member of the Armed Forces or an officer or employee of the DoD who possesses knowledge and expertise relevant to aviation mishap investigations. Other investigative team members may be added to provide necessary expertise or administrative support, as required.
4. During the conduct of this investigation, you are to observe the requirements of the Privacy Act, Article 31(b) of the Uniform Code of Military Justice, and paragraphs 0209, Parts E and F, and Appendix A-2-n of reference (a).
5. Note that there is a concurrent aviation mishap safety investigation into this incident, and a JAGMAN investigation is considered collateral to the safety investigation. You are directed to ensure your investigation does not violate the privileged nature of the safety investigation. Specifically, you are prohibited from using privileged statements provided in conjunction with the aviation mishap safety investigation. No witness will be questioned regarding information provided to the aviation mishap safety investigation under the promise of confidentiality. Finally, you may not use the opinions, analysis, or conclusions of the aviation mishap safety investigation, or any subsequent endorsements thereon.

Subj: COMMAND INVESTIGATION INTO THE FACTS AND CIRCUMSTANCES
SURROUNDING THE CLASS A AVIATION MISHAP INVOLVING THE MV-22
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DECEMBER 2016 OFF THE COAST OF OKINAWA, JAPAN

6. You are directed to seek legal advice from the 1st Marine Aircraft Wing Staff Judge Advocate
office. Assistant Staff Judge Advocate (b)(6) (b)(3) 10 U.S. Code § 130b can be reached at
(b)(6) (b)(3) 10 U.S. Code § 130b

7. The point of contact for this matter is 1st Marine Aircraft Wing Staff Judge Advocate,
(b)(6) (b)(3) 10 U.S. Code § 130b at (b)(6) (b)(3) 10 U.S. Code § 130b

(b) (6) b (3) 10 USC 130b



UNITED STATES MARINE CORPS

1ST MARINE AIRCRAFT WING

UNIT 37101

FPO AP 96373-7101

IN REPLY REFER TO:

5830

CG

11 APR 2017

FIRST ENDORSEMENT on (b)(6) (b)(3) 10 U.S. Code § 1tr 5830 CG of 30 Mar 17

From: Commanding General, 1st Marine Aircraft Wing

To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: REQUEST FOR EXTENSION ICO 13 DECEMBER 2016 MV-22B MISHAP
COMMAND INVESTIGATION

1. Returned. Your request for an extension is granted. Your investigation is now due 30 April 2017.

(b) (6) b (3) 10 USC 130b

Copy to:
SJA, 1st MAW

V-22 VMM-265 Japan Mishap Analysis – JAG Investigation Questions

Acronyms and Abbreviations:

| | |
|--------|--|
| AMC | Advanced Mission Computer |
| CSDDD | Crew Systems Design Definition Document |
| EDR | Engineering Design Report |
| EICAS | Engine Instrument Crew Alerting System (<i>center screen between the pilots</i>) |
| FCC | Flight Control Computer |
| HYD | Hydraulic |
| INBD | Inboard |
| KVADR | Voice and Data Recorder, Model K (<i>crash-survivable recorder</i>) |
| LVDT | Linear Variable Differential Transducer |
| MFS | Manned Flight Simulator (<i>located at NAS Patuxent River Maryland</i>) |
| NATOPS | Naval Air Training and Operating Procedures Standardization |
| OTBD | Outboard |
| WCA's | Warnings / Cautions / Advisories |
| WRA | Weapons Replaceable Assembly |



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239



Tuesday, December 13, 2016 (16348)

| DUTIES | | | | SBTP | | | |
|--------|-----------------------------------|--------------------|--------------------|-------------|------------|------------|----------------|
| SDO: | (b)(6) (b)(3) 10 U.S. Code § 130b | 0800 - 0800 | ROTM FIELD HOURS: | 0700 - 2300 | SCHEDULED | DECEMBER | QTR |
| SDC: | | 0800 - 0800 | ROTM QUIET HOURS: | NONE | 14 | 135/89.4 | 470/468.7 |
| DNCO: | | 0800 - 0800 | ROTM GMT: | +9(I) | 22.2 | FCST / ACT | FCST / ACT |
| ADNCO: | | 0800 - 0800 | | | | | |
| ODO: | | 0530 - 1200 | | | | | |
| ODO: | | 1200 - 1800 | | | | | |
| ODO: | | 1800 - LPOD | | | | | |
| ROTM | BMNT: 0614 | SR/SS: 0708 / 1739 | MR/MS: 1711 / 0550 | ILLUM: 98% | EENT: 1833 | LLL: NONE | HLL: 1833-0534 |

FLIGHT EVENTS

| EVENT | TMS | C/S | BRF/ETD/ETA | ICAO | CREW | T&R | TMR | MSN | SBTP | NOTE |
|-----------|--------|-----------------------------------|----------------|-----------|-----------------------------------|--|-----|-------------------------------------|-------|-------|
| 1171 | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0730/TBD/TBD | ROTM/ROTM | (b)(6) (b)(3) 10 U.S. Code § 130b | 2030 2030 2032 | 2K2 | FCF | 0/0.0 | |
| 1101 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0600/0830/1130 | ROTM/ROTM | SL | 2233,6240 5631X 2233 2233 | 1B1 | SEC LAT / LAT IUT | 1/3.0 | 1,2 |
| 1102 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0600/0830/1130 | ROTM/ROTM | | 2233 2233 2233 2233 | 1A1 | SEC LAT | 1/3.0 | 1,2 |
| 1103 G | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0930/1200/1700 | ROTM/ROTM | | 2135,6231X 2135 2135 2135 | 2M4 | MASS CAS DRILL / SLUI / MOTO FLIGHT | 4/4.0 | 3 |
| 1104 G | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0930/1200/1700 | ROTM/ROTM | SL | 2135,6240 2135 2135 2135 | 2M4 | MASS CAS DRILL / MOTO FLIGHT | 4/4.0 | 3 |
| 1105 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 1500/1745/2200 | ROTM/ROTM | SL | 2232,2335,6240 2332,2334X,2335X 2332,2433X 2332,2335 2332,2335 | 1A9 | HLL SEC LAT / TAAR | 2/4.3 | 4,5,6 |
| 106 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 1500/1745/2200 | ROTM/ROTM | | 2232,2335 2332,2334X,2335X 2332,2433 2332,2335 2332,2335 | 1A9 | HLL SEC LAT / TAAR | 2/4.3 | 4,5,6 |

Flight Notes:

- 1 - IE SHIMA VTOL PADS RESERVED 0830-1100.
- 2 - AMAMI LAT ROUTE RESERVED 0900-1100. MIN AUTHORIZED ALTITUDE 500' AGL. TERF ROUTE RESERVED 1430 - 1700 MIN AUTHORIZED ALTITUDE 100' AGL.
- 3 - PAX TO MUSTER WITH ODO AT 1130 AND 1430 AS DESIGNATED.
- 4 - LZ FALCON RESERVED 2000-2200.
- 5 - AMAMI LAT ROUTE DECONFLICTED WITH VMM-262(REIN) 1830-2000, POC (b)(6) (b)(3) 10 U.S. Code § 130b, FREQ (118.15). MIN AUTHORIZED ALTITUDE 500' AGL.
- 6 - SHARK TRACK RESERVED 2030-2200 WITH JAKAL, POC 353 SOG OPS (634-9075/4661) FREQ(312.2).

GROUND EVENTS

| START | END | SUBJECT | LOCATION | POC | PERSONNEL | NOTES |
|-------|------|-----------------------------------|----------------|-----------------------------------|------------------------------|-------|
| 0500 | 0600 | BCP/RCP | SEMPER FIT GYM | (b)(6) (b)(3) 10 U.S. Code § 130b | DESIGNATED MARINES | |
| 0700 | 0730 | AM MX MEETING | MX CONTROL | (b)(6) (b)(3) 10 U.S. Code § 130b | MX PERSONNEL | |
| 0800 | 1600 | CACO TRAINING | FOSTER THEATER | (b)(6) (b)(3) 10 U.S. Code § 130b | AVAILABLE OFFICERS AND SNCOS | |
| 0830 | 0900 | JMPS MPE TRAINING | READY ROOM | (b)(6) (b)(3) 10 U.S. Code § 130b | ALL COMPANY GRADE PILOTS | |
| 1615 | 1645 | EO AND SEXUAL HARASSMENT TRAINING | READY ROOM | (b)(6) (b)(3) 10 U.S. Code § 130b | UNTRAINED PERSONNEL | |
| 1715 | 1730 | PM MX MEETING | MX CONTROL | (b)(6) (b)(3) 10 U.S. Code § 130b | MX PERSONNEL | |
| NLT | 0300 | NIGHT CREW MX MEETING | MX CONTROL | (b)(6) (b)(3) 10 U.S. Code § 130b | MX PERSONNEL | |

QUESTIONS OF THE DAY:

- MV-22B EP: ENG IPS FAIL.
- MV-22B NATOPS: DURING AERIAL REFUELING, DISENGAGEMENT FROM A SUCCESSFUL CONTACT IS ACCOMPLISHED BY REDUCING POWER AND BACKING OUT A ___ TO ___ KNOT SEPARATION RATE. (3, 5)
- TACTICS: DURING AERIAL DELIVERY, WHAT IS THE MINIMUM ACCEPTABLE ALTITUDE FOR EMERGENCY PARACHUTIST BAILOUT? (400 FEET ABOVE TERRAIN.)

OPS X

MAINT X

DOSS X

XO X

(b)(6) (b)(3) 10 USC 130b



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239

FPO AP 96372-7239

Tuesday, December 13, 2016 (16348)



| DUTIES | | ROT M FIELD HOURS: | | SCHEDULED | | SBTP | | QTR | | FY | |
|--------|---|--------------------|--------------------|------------|------------|-----------|----------------|------------|------------|------------|------------|
| SDO: | (b)(6) (b)(3) 10 U.S. Code § 130b | 0800 - 0800 | 0700 - 2300 | 14 | 22.2 | 135/89.4 | 476/468.7 | FCST / ACT | FCST / ACT | 2200/468.7 | FCST / ACT |
| SDC: | | 0800 - 0800 | ROT M QUIET HOURS: | NONE | | | | | | | |
| DNCO: | | 0800 - 0800 | ROT M GMT: | +9(i) | | | | | | | |
| ADNCO: | | 0800 - 0800 | | | | | | | | | |
| ODO: | | 0530 - 1200 | | | | | | | | | |
| ODO: | | 1200 - 1800 | | | | | | | | | |
| ODO: | | 1800 - LPOD | | | | | | | | | |
| ROT M | BMNT: 0614 | SR/SS: 0708 / 1739 | MR/MS: 1711 / 0550 | ILLUM: 98% | EGNT: 1833 | LLL: NONE | HLL: 1833-0614 | | | | |

FLIGHT EVENTS

| EVENT | TMS | C/S | BRF/ETD/ETA | ICAD | CREW | T&R | TMR | MSN | SBTP | NOTE |
|-----------|--------|---|--------------------------------|-------------|-----------------------------------|---|-----|-------------------------------------|-------|-------|
| 1171 | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0730/TBD/TBD | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2030 2030 2032 | 2K2 | FCF | 0/0.0 | |
| 1101 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0600/0830/1130 0830 | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2235, 6240 5631X 2235 2235 | 1B1 | SEC LAT / LAT IUT | 1/3.0 | 1,2 |
| 1102 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0600/0830/1130 0830 | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2235 2235 2235 | 1A1 | SEC LAT | 1/3.0 | 1,2 |
| 1103 G | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0930/1200/1700 1155 | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2135, 6231X 2135 2135 2135 | 2M4 | MASS CAS DRILL / SLUI / MOTO FLIGHT | 4/4.0 | 3 |
| 1104 G | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0930/1200/1700 | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2135, 6240 2135 2135 2135 | 2M4 | MASS CAS DRILL / MOTO FLIGHT | 4/4.0 | 3 |
| 1105 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 1500/1745/2200 2245 1830 | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2232, 2335, 6240 2332, 2334X, 2335X 2332, 2433X 2332, 2335 2332, 2335 | 1A9 | HLL SEC LAT / TAAR | 2/4.3 | 4,5,6 |
| 1106 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 1500/1745/2200 | ROT M/ROT M | (b)(6) (b)(3) 10 U.S. Code § 130b | 2232, 2335 2332, 2334X, 2335X 2332, 2433 2332, 2335 2332, 2335 | 1A9 | HLL SEC LAT / TAAR | 2/4.3 | 4,5,6 |

Flight Notes:

- 1 - IE SHIMA VTOL PADS RESERVED 0830-1100
- 2 - AMAMI LAT ROUTE RESERVED 0900-1100. MIN AUTHORIZED ALTITUDE 500' AGL. TERF ROUTE RESERVED 1430 - 1700 MIN AUTHORIZED ALTITUDE 100' AGL.
- 3 - PAX TO MUSTER WITH ODO AT 1130 AND 1430 AS DESIGNATED.
- 4 - L2 FALCON RESERVED 2000-2200.
- 5 - AMAMI LAT ROUTE DECONFLICTED WITH VMM-262(REIN) 1830-2000, POC (b)(6) (b)(3) 10 U.S. Code § 130b FREQ (118.15). MIN AUTHORIZED ALTITUDE 500' AGL.
- 6 - SHARK TRACK RESERVED 2030-2200 WITH JAKAL, POC 353 SOG OPS (634-9079/4661) FREQ(312.7).

GROUND EVENTS

| START | END | SUBJECT | LOCATION | POC | PERSONNEL | NOTES |
|-------|------|-----------------------------------|----------------|-----------------------------------|------------------------------|-------|
| 0500 | 0600 | BCP/RCP | SEMPER FIT GYM | (b)(6) (b)(3) 10 U.S. Code § 130b | DESIGNATED MARINES | |
| 0700 | 0730 | AM MX MEETING | MX CONTROL | (b)(6) (b)(3) 10 U.S. Code § 130b | MX PERSONNEL | |
| 0800 | 1600 | CACD TRAINING | FOSTER THEATER | (b)(6) (b)(3) 10 U.S. Code § 130b | AVAILABLE OFFICERS AND SNCOs | |
| 0830 | 0900 | JMPS MPE TRAINING | READY ROOM | (b)(6) (b)(3) 10 U.S. Code § 130b | ALL COMPANY GRADE PILOTS | |
| 1615 | 1645 | EO AND SEXUAL HARASSMENT TRAINING | READY ROOM | (b)(6) (b)(3) 10 U.S. Code § 130b | UNTRAINED PERSONNEL | |
| 1715 | 1730 | PM MX MEETING | MX CONTROL | (b)(6) (b)(3) 10 U.S. Code § 130b | MX PERSONNEL | |
| NLT | 0300 | NIGHT CREW MX MEETING | MX CONTROL | (b)(6) (b)(3) 10 U.S. Code § 130b | MX PERSONNEL | |

QUESTIONS OF THE DAY:

- MV-22B EP: ENG IPS FAIL.
MV-22B NATOPS: DURING AERIAL REFUELING, DISENGAGEMENT FROM A SUCCESSFUL CONTACT IS ACCOMPLISHED BY REDUCING POWER AND BACKING OUT A ___ TO ___ KNOT SEPARATION RATE. (3, 5)
TACTICS: DURING AERIAL DELIVERY, WHAT IS THE MINIMUM ACCEPTABLE ALTITUDE FOR EMERGENCY PARACHUTIST BAILOUT? (400 FEET ABOVE TERRAIN.)

OPS X

MAINT X

DOSS X

XO X

(b)(6) (b)(3) 10 USC 130b

33rd
37th Co
1100-1930 final Run
1530-1900 - 27th

1145 - 2000
0800-1715
1500-1715
MTR 1830-2200



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239



Saturday, December 10, 2016 (16345)

| | | | | | | | | |
|--------------|-----------------------------------|--------------------|--------------------|------------|--------------|-------------------|----------------|------------|
| SDO: | (b)(6) (b)(3) 10 U.S. Code § 130b | 0800 - 0800 | ROTM FIELD HOURS: | 1000-1800 | SCHEDULED | SBTP | QTR | FY |
| SDC: | | 0800 - 0800 | ROTM QUIET HOURS: | NONE | MV-22B 0 0.0 | DECEMBER 135/89.4 | 470/468.7 | 2200/468.7 |
| DNCO: | | 0800 - 0800 | ROTM GMT: | +9(i) | | FCST / ACT | FCST / ACT | FCST / ACT |
| ADNCO: | | 0800 - 0800 | | | | | | |
| ROVER: | | 2200 - 0200 | | | | | | |
| ROVER: | | 2200 - 0200 | | | | | | |
| STANDBY ODO: | | 0700 - 1200 | | | | | | |
| ROTM | BMNT: 0612 | SR/SS: 0706 / 1738 | MR/MS: 1440 / 0234 | ILLUM: 78% | EENT: 1832 | LLL: 0216-0600 | HLL: 1832-0324 | |

FLIGHT EVENTS

| EVENT | TMS | C/S | BRF/ETD/ETA | ICAO | CREW | T&R | TMR | MSN | SBTP | NOTE |
|---|--------|-----------|-------------|-----------|-----------------------------------|------------------------------|-----|-----|-------|------|
| 1171 E | MV-22B | DRAGON 71 | TBD/TBD/TBD | ROTM/ROTM | (b)(6) (b)(3) 10 U.S. Code § 130b | 4032 4032 4031 4031 | 2M4 | FBS | 0/0.0 | 1 |
| Flight Notes: 1 - CREW ON 120 MIN ALERT. | | | | | | | | | | |

Sunday, December 11, 2016 (16346)

| | | | | | | | | |
|--------|-----------------------------------|--------------------|--------------------|------------|--------------|-------------------|----------------|------------|
| SDO: | (b)(6) (b)(3) 10 U.S. Code § 130b | 0800 - 0800 | ROTM FIELD HOURS: | CLOSED | SCHEDULED | SBTP | QTR | FY |
| SDC: | | 0800 - 0800 | ROTM QUIET HOURS: | NONE | MV-22B 0 0.0 | DECEMBER 135/89.4 | 470/468.7 | 2200/468.7 |
| DNCO: | | 0800 - 0800 | ROTM GMT: | +9(i) | | FCST / ACT | FCST / ACT | FCST / ACT |
| ADNCO: | | 0800 - 0800 | | | | | | |
| ROTM | BMNT: 0612 | SR/SS: 0706 / 1738 | MR/MS: 1526 / 0338 | ILLUM: 87% | EENT: 1832 | LLL: 0324-0600 | HLL: 1832-0434 | |

GROUND EVENTS

| START | END | SUBJECT | LOCATION | POC | PERSONNEL | NOTES |
|-------|------|-----------------------|------------------|-----------------------------------|---------------------|-------|
| 1600 | 1800 | CFT | SEMPER FIT FIELD | (b)(6) (b)(3) 10 U.S. Code § 130b | UNTRAINED PERSONNEL | |
| 1715 | 1730 | PM MX MEETING | MX CONTROL | | MX PERSONNEL | |
| NLT | 0300 | NIGHT CREW MX MEETING | MX CONTROL | | MX PERSONNEL | |

Monday, December 12, 2016 (16347)

| | | | | | | | | |
|--------|-----------------------------------|--------------------|--------------------|-------------|--------------|-------------------|----------------|------------|
| SDO: | (b)(6) (b)(3) 10 U.S. Code § 130b | 0800 - 0800 | ROTM FIELD HOURS: | 0700 - 2300 | SCHEDULED | SBTP | QTR | FY |
| SDC: | | 0800 - 0800 | ROTM QUIET HOURS: | NONE | MV-22B 2 6.0 | DECEMBER 135/89.4 | 470/468.7 | 2200/468.7 |
| DNCO: | | 0800 - 0800 | ROTM GMT: | +9(i) | | FCST / ACT | FCST / ACT | FCST / ACT |
| ADNCO: | | 0800 - 0800 | | | | | | |
| ODO: | | 0700 - 1200 | | | | | | |
| GDO: | | 1200 - 1400 | | | | | | |
| ROTM | BMNT: 0613 | SR/SS: 0707 / 1738 | MR/MS: 1616 / 0443 | ILLUM: 94% | EENT: 1832 | LLL: 0434-0601 | HLL: 1832-0550 | |

FLIGHT EVENTS

| EVENT | TMS | C/S | BRF/ETD/ETA | ICAO | CREW | T&R | TMR | MSN | SBTP | NOTE |
|--------|--------|-----------------------------------|----------------|-----------|-----------------------------------|--|------------|------------------------|-------|------|
| 1171 | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0730/TBD/TBD | ROTM/ROTM | (b)(6) (b)(3) 10 U.S. Code § 130b | 2030 2030 2032 | 2K2 | FCF | 0/0.0 | |
| 1101 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0730/1000/1300 | ROTM/ROTM | (b)(6) (b)(3) 10 U.S. Code § 130b | 2135,2233,6240 2135,2020X,2231X,2233X 2135,2233 2135,2233,5630X | 1A1 1B1 | LAT / CAL / LAT IUT | 1/3.0 | 1,2 |
| 1102 A | MV-22B | (b)(6) (b)(3) 10 U.S. Code § 130b | 0730/1000/1300 | ROTM/ROTM | (b)(6) (b)(3) 10 U.S. Code § 130b | 2135,2233 2135,2020X,2231X,2233X 2135,2233 2135,2233 | 1A1 | LAT / CAL | 1/3.0 | 1,2 |

Flight Notes:
1 - AMAMILAT ROUTE RESERVED 1030-1230. MIN AUTHORIZED ALT 500' AGL.
2 - IE SHIMA V-TOL PADS RESERVED 1000-1230. MAX ALTITUDE 10,000' AGL.

SIMULATOR

| EVENT | DEVICE | BRF/ETD/ETA | CREW | T&R | TMR | MSN | SBTP | NOTE |
|-------|--------|----------------|-----------------------------------|--|-----|------------|-------|------|
| SIM | CFTD-7 | 1100/1200/1400 | (b)(6) (b)(3) 10 U.S. Code § 130b | DO 6013,6014,6015,6032,6033 6013,6014,6015,6032,6033 | 213 | INST CHECK | 1/2.0 | |
| SIM | CFTD-7 | 1330/1430/1630 | (b)(6) (b)(3) 10 U.S. Code § 130b | 2330,6033,6240 2333X,6033 | 1A9 | NS HLL LAT | 1/2.0 | |
| SIM | CFTD-8 | 1330/1430/1630 | (b)(6) (b)(3) 10 U.S. Code § 130b | 2330,6033 2333X,6033 | 1A9 | NS HLL LAT | 1/2.0 | |

| GROUND EVENTS | | | | | |
|---------------|------|------------------------------|---------------------|-----------------------------------|-----------------------------------|
| START | END | SUBJECT | LOCATION | POC | PERSONNEL |
| 0500 | 0600 | BCF/RCP | SEMPER FIT GYM | (b)(6) (b)(3) 10 U.S. Code § 130b | DESIGNATED PERSONNEL |
| 0700 | 0730 | AM MX MEETING | MX CONTROL | | MX PERSONNEL |
| 1000 | 1100 | LATI LECTURE (5610) AND TEST | READY ROOM | | (b)(6) (b)(3) 10 U.S. Code § 130b |
| 1100 | 1200 | BIP BRIEF | PLANNING ROOM | | |
| 1300 | 1400 | STAFF MEETING | CONFERENCE ROOM | | |
| 1430 | 1630 | TG ACAD | HERITAGE ROOM | | |
| 1500 | 1600 | MAG OPSO MEETING | MAG CONFERENCE ROOM | | |
| 1600 | 1800 | CFT | SEMPER FIT FIELD | | UNTRAINED PERSONNEL |
| 1700 | 1800 | MX TRAINING | SHOP SPACES | | MX PERSONNEL |
| 1715 | 1730 | PM MX MEETING | MX CONTROL | | MX PERSONNEL |
| NLT | 0300 | NIGHT CREW MX MEETING | MX CONTROL | | MX PERSONNEL |

QUESTIONS OF THE DAY:
 MV-22B EP:
 MV-22B NATOPS:
 TACTICS:
 OPS X
 MAINT X
 DOSS X
 XO X

STALL
 "MANEUVER SEVERITY - REDUCE" IS DEFINED AS FLYING THE AIRCRAFT TO MINIMIZE _____ AND _____ FROM THE PILOT.
 (AGGRESSIVE, MANEUVERING, FLIGHT CONTROL COMMANDS)
 _____ IS A MANEUVER TO IMMEDIATELY STOP DOWNRANGE CLOSURE ON AN OBSTACLE, WEATHER CONDITION, OR THREAT SYSTEM. (PUMP)

(b) (6) b (3) 10 USC 130b

RISK ASSESSMENT

| | | | |
|--|-----|-----------------------------|-----|
| tside Agency Frag | | M | (L) |
| ssion Precedence > Routine | | M | (L) |
| crew qualified for event | | (L) | M* |
| ropriate airspace scheduled | | | M |
| sk = L if training flight with a qualified instructor. | | | (L) |
| ssion Tabs | TAB | Mission Specific Risk Level | |
| eneral FAM/INST/NAV/CCX | 1 | (L) | M |
| mation | 2 | (L) | M |
| L | 3 | (L) | M* |
| L | 4 | L | M |
| F | 5 | L | M |
| T/TERF | 6 | (L) | M* |
| ctics | 7 | L | M |
| R | 8 | (L) | M |
| distance | 9 | L | M |
| | 10 | L | M |
| R/DCM | 11 | L | M |
| ternals | 12 | L | M |
| ipboard/FCLP | 13 | L | M |
| Support | 14 | L | M |
| IRN | 15 | L | M |
| ET | 16 | L | M |

| | TAC | CoPilot | C/C | A/O |
|--------------------|-----|---------|-----|-----|
| R Non-Proficient | M | M* | M | M* |
| st flight >30 days | M | M* | M | M* |
| T >30 days | M | M* | M | M* |
| *G > 30 days | M | M** | M | M** |
| I >30 days | M | M* | M | M* |
| *G CQ >30 days | M | M** | M | M** |

| | | | | |
|--|-------|-------|-------|-------|
| TOPS | | | | |
| pired NATOPS Requirements* | NO-GO | NO-GO | NO-GO | NO-GO |
| nless with qualified instructor or in appropriate syllabus | | | | |

| | | |
|--|---|---|
| 26/Copilot Planned Flight Duration >6 hrs | M | L |
| listed Aircrew Flight Duration > 8 hrs | M | L |
| aw Rest < SOP | M | L |
| ter Temp < 50°F & extended flight over water (Exposure Suit Req'd) | M | L |
| AT < 32°F with extended flight over water | M | L |
| ie Water Ops/No suitable divert | M | L |

| Model/Component/Parameter/Variable | RAC Level | Control Measure(s) / Mitigation | New RAC Level |
|------------------------------------|-----------|---------------------------------|---------------|
| | M H | | L M H |
| | M H | | L M H |
| | M H | | L M H |
| | M H | | L M H |
| | M H | | L M H |

Flight Brief - MAG / MEU CO Signature High (required if Risk level upgrades from Low or Medium)

| MISSION REQUIREMENTS (CAM/INST/NAV/CCX) | YES | NO |
|--|-----|-----|
| Mission requires a deviation from SOP/NATOPS/OPNAV | M | (L) |

| PILOT INFORMATION | YES | NO |
|--|-----|-----|
| Dissimilar aircraft (Non-Tanker) | M* | (L) |
| Pilots and aircrew from another squadron | M* | (L) |
| Flight conducted with all aircrew | | |

| LOCATION | YES | NO |
|----------------------------|-----|-----|
| CAL site DOD | (L) | M |
| CAL site in populated area | M | (L) |
| Non-Surveyed Zone | M | (L) |

| FAIRLY (Brownout conditions expected) | YES | NO |
|---------------------------------------|-----|----|
| RVL flight or sim within 30 days | L | M |
| LZ survey completed | L | M |

| ROUTE | YES | NO |
|---|-----|-----|
| More than a Division in LAT/TERF profile | M | (L) |
| Has the pilot or copilot flown the route? | (L) | M |
| Route certification or re-validation? | M | (L) |

| AMC/EFL/AFL BRIEFS | YES | NO |
|---|-----|----|
| AMC/EFL/AFL briefs conducted face to face | L | M |
| MV-22 Combat Assault Transport of 24 pax authorized | M | L |

| RECEIVERS | YES | NO |
|--------------------------------------|-----|-----|
| Dissimilar receivers | M | (L) |
| AAR required with no suitable divert | H | (L) |

| PERFORMANCE | YES | NO |
|--|-----|-------|
| Range regulations established/received | L | NO-GO |
| LASERS | M | L |
| CAS, OAS, FAC(A), Sim CAS | M | L |
| Surface Fires (Arty, Mortars) | M | L |

| TAB 9 AIE | YES | NO |
|---------------------------|-----|----|
| Is DZ Bldg/Ship/Structure | M | L |
| Soft Duck | M | L |

| TAB 10 GTR/DCM | YES | NO |
|---|-----|-------|
| Day | L | M |
| # Friendly aircraft - more than a section | M | L |
| Adversary brief scheduled | L | No-Go |
| U.S. Range Control | L | M |
| Free play allowed | M | L |

| TAB 11 EXTERNALS | YES | NO |
|-------------------------------------|-----|----|
| Face to face with HST brief planned | L | M |
| Load crosses populated areas | M | L |
| LAT environment | M | L |
| DOD certified area | L | M |
| Brownout Conditions | H | L |
| Certified Load | L | M |

| TAB 12 SHIPBOARD/FCLP | YES | NO |
|---|-----|----|
| Greater than 3 aircraft in the FCLP pattern with a briefed deconfliction plan | L | M |
| Published launch/recovery wind limits | L | M |
| Unaided | M | L |
| US Ship | L | M |

| TAB 13 VIP SUPPORT | YES | NO |
|--|-----|----|
| Is a non-qualified person at the controls? | M | L |
| If non-NATOPS qualified, TAC should be NI or ANI | | |

| TAB 14 CBRN | YES | NO |
|--------------------------------------|-----|----|
| Aircrew on mask for >2 hours | H | M |
| Both pilots on NBC mask at same time | M | L |
| Flown over water | M | L |
| OAT over 27 deg C/80 deg F | H | M |

| TAB 15 MAT | YES | NO |
|--------------------|-----|----|
| DTED loaded in RMU | L | M |



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO:

3710

DSS

NOV 15 2016

From: Department of Safety and Standardization, Marine Medium Tiltrotor Squadron 265
To: Commanding Officer, Marine Medium Tiltrotor Squadron 265
Subj: STANDARDIZATION/INSTRUMENT FLIGHT BOARD AND AVIATION SAFETY COUNCIL OF 7 NOVEMBER 2016
Ref: (a) OPNAVINST 3710.7U
(b) OPNAVINST 3750.6 SERIES
(c) SqdnO P3710.2L

1. Per the references, the Standardization (Stan) and Instrument Flight Board met on 7 November 2016. The following personnel were in attendance:

| Rank | Name | Billet |
|-----------------------------------|------|--------------------------------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | | Executive Officer |
| | | Aviation Maintenance Officer |
| | | Pilot Training Officer |
| | | Aviation Safety Officer / DOSS |
| | | NATOPS Officer |
| | | Flight Surgeon |
| | | Enlisted Aircrew WTI |

2. Agenda Items

a. Topic: Designation Proposals

Discussion: The Stan Board submits the following proposals for approval:

MV-22B:

| | |
|-----------------------------------|------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | AMC |
| | FL |
| | LATI |

CO Comments:

Concur.

3. These minutes are submitted for endorsement by the Commanding Officer.

(b)(6) (b)(3) 10 U.S. Code § 130b

Enclosure 7

Statement derived from interview of REDACTED

5 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 8

Statement Testimony of REDACTED

7 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 9

Statement Testimony of REDACTED

4 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 10

Statement Testimony of REDACTED

2 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 11

Excerpt from UNITED STATES ATP 3.3.4.2 (C) STANDARDS RELATED DOCUMENT

21 pages

Withheld in accordance with FOIA Exemption (b)(3) 10 U.S.C. § 130

Enclosure 12

Excerpt from AIR NTTP 3-22.3-MV-22

20 pages

Withheld in accordance with FOIA Exemption (b)(3) 10 U.S.C. § 130

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET
OPNAV 3760/32C (4-81) SN 0107-LF-736-2140

SECTION IIA - FLIGHT PERSONNEL DESIGNATION RECORD

NAME (Last, first, middle initial)

(b)(6) (b)(3) 10 U.S. Code §

SSN



| DATE | DESIGNATION | MODEL | UNIT | PROMULGATION BY | VERIFIED |
|-------------|-------------------------------|--------|----------------|-----------------------------------|----------|
| 28 FEB 12 | Naval Aviator | TC12B | VT-35 | (b)(6) (b)(3) 10 U.S. Code § 130b | |
| 10 MAY 12 | Asst. Dir. Duty Off | | VMMT-204 | | |
| 06 AUG 12 | T2P | MV22B | VMMT-204 | | |
| 31 OCT 14 | TAC | MV22B | VMM-365 (REIN) | | |
| 12 MAR 15 | Section Lead | MV22B | VMM-365 (REIN) | | |
| 4 JUN 15 | LATI | MV22B | VMM-365 (REIN) | | |
| 23 OCT 15 | ACCEPT OF PREV | MV22B | VMM-265 | | |
| * 23 JUL 15 | FCP | MV22B | VMM 365 | | |
| 3 JUN 16 | Acceptance ^{Control} | MV22B | VMM 265 | | |
| 8 JUN 16 | DL | MV22B | VMM 265 | | |
| 13 JUN 16 | INST E | MV22B | VMM 265 | | |
| 14 JUN 16 | CRM F | MV22B | VMM 265 | | |
| 15 JUN 16 | CRM I | MV22B | VMM 265 | | |
| 15 JUN 16 | CRM ILM | MV22B | VMM 265 | | |
| * 31 OCT 14 | BIP | MV22B | VMM-265 | | |
| 5 AUG 15 | NSI | MV22B | VMM-265 | | |
| 18 OCT 16 | AARI | MV-22B | VMM-265 | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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(b)(6) (b)(3) 10 U.S. Code § 130b



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 365
MARINE AIRCRAFT GROUP 26
2D MARINE AIRCRAFT WING
POSTAL SERVICE CENTER BOX 21026
JACKSONVILLE, NORTH CAROLINA 28545-1026

IN REPLY REFER TO:
3750
DSSN
10 Apr 14

From: Commanding Officer, Marine Medium Tiltrotor Squadron 365

To: (b)(6)(b)(3) 10 U.S. Code § 130b

Subj: QUALIFICATION

Ref: (a) OPNAVINST 3710.7U

(b) MCO P3500.34

(c) A1-V22AB-NFM-000

1. Per the references, you are qualified as noted below.

| Qualification | Effective Date |
|--|----------------|
| Low Altitude Tactics | 15 Dec 12 |
| Night Systems Qualified-High Light Level | 27 Feb 13 |
| Night Systems Qualified-Low Light Level | 13 Mar 13 |
| Aerial Refueling | 5 Jul 13 |
| Carrier Qualification | 10 Apr 14 |
| Defensive Combat Maneuvers | N/A |

2. This letter will be maintained in your NATOPS jacket until superseded or cancelled by subsequent correspondence.

(b)(6)(b)(3) 10 U.S. Code §
130b

Copy to:
Operations/APR
Flight logbook entry

OPNAV 3760/32D (Rev. 4-90) S/N 0107-LF-009-7500

NAME (Last, first, middle initial)

(b)(6) (b)(3) 10 U.S. Code § 130b

| |
|-----|
| SSN |
|-----|

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO:

3710

DSS

18 Oct 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265

To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: DESIGNATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14 SERIES
(c) NAVMC 3500.11 SERIES
(d) A1-V22AB-NFM-000

1. Per the references, you are designated as noted below.

| Designation | Effective Date |
|---|----------------|
| NAVAL AVIATOR | 28 Feb 12 |
| TILTROTOR SECOND PILOT | 6 Aug 12 |
| TILTROTOR AIRCRAFT COMMANDER | 31 Oct 14 |
| SECTION LEAD | 12 Mar 15 |
| DIVISION LEAD | 8 Jun 16 |
| FLIGHT LEAD | N/A |
| AIR MISSION COMMANDER | N/A |
| FUNCTIONAL CHECK PILOT | 23 Jul 15 |
| BASIC INSTRUCTOR PILOT | 31 Oct 14 |
| FLIGHT LEAD STANDARDIZATION EVALUATOR | N/A |
| AIR TO AIR REFUELING INSTRUCTOR | 18 Oct 16 |
| TACTICAL SIMULATION INSTRUCTOR | N/A |
| LOW ALTITUDE TACTICS INSTRUCTOR | 4 Jun 15 |
| DEFENSIVE COMBAT MANEUVER INSTRUCTOR | N/A |
| REDUCED VISIBILITY LANDING INSTRUCTOR | N/A |
| NIGHT SYSTEMS INSTRUCTOR | 5 Aug 16 |
| WEAPONS AND TACTICS INSTRUCTOR | N/A |
| NATOPS INSTRUMENT EVALUATOR | 13 Jun 16 |
| CREW RESOURCE MANAGEMENT FACILITATOR | 14 Jun 16 |
| CREW RESOURCE MANAGEMENT INSTRUCTOR | 15 Jun 16 |
| CREW RESOURCE MANAGEMENT UNIT LEVEL MANAGER | 15 Jun 16 |
| ASSISTANT NATOPS INSTRUCTOR | N/A |

2. This letter will be maintained in your NATOPS jacket until superseded or cancelled by subsequent correspondence (b)(6) (b)(3) 10 U.S. Code § 130b

Copy to:
Operations/APR
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO:
3710
DSS
5 Aug 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: DESIGNATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14 SERIES
(c) NAVMC 3500.11 SERIES
(d) A1-V22AB-NFM-000

1. Per the references, you are designated as noted below.

| Designation | Effective Date |
|---|----------------|
| NAVAL AVIATOR | 28 Feb 12 |
| TILTROTOR SECOND PILOT | 6 Aug 12 |
| TILTROTOR AIRCRAFT COMMANDER | 31 Oct 14 |
| FUNCTIONAL CHECK PILOT | 23 Jul 15 |
| SECTION LEAD | 12 Mar 15 |
| DIVISION LEAD | 8 Jun 16 |
| BASIC INSTRUCTOR PILOT | 31 Oct 14 |
| LOW ALTITUDE TACTICS INSTRUCTOR | 4 Jun 15 |
| NIGHT SYSTEMS INSTRUCTOR | 5 Aug 16 |
| NATOPS INSTRUMENT EVALUATOR | 13 Jun 16 |
| CREW RESOURCE MANAGEMENT FACILITATOR | 14 Jun 16 |
| CREW RESOURCE MANAGEMENT INSTRUCTOR | 15 Jun 16 |
| CREW RESOURCE MANAGEMENT UNIT LEVEL MANAGER | 15 Jun 16 |

2. This letter will be maintained in your NATOPS jacket until superseded or cancelled by subsequent correspondence.

(b)(6) b (3) 10 USC 130b

Copy to:
Operations/APR
DSS

SECTION IIB - MISSION QUALIFICATION RECORD

SSN

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO:
3710
DSS
3 Jun 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: PREVIOUSLY HELD DESIGNATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14D
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22B-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and the capabilities required in the MV-22B, the following designations remain in effect:

Naval Aviator
Tiltrotor Second Pilot

2. Per the references, the following qualifications remain in effect:

Low Altitude Tactics Qualification
NSQ High Light Level

3. Upon receipt of this letter, appropriate entries will be made in your Aircrew Performance Record, and NATOPS Qualification Jacket.

(b) (6) b (3) 10 USC 130b

Copy to:
S-3
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO:
3710
DSS
19 Mar 15

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: PREVIOUSLY HELD DESIGNATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14B
(c) NAVMC 3500.11B
(d) NAVAIR A1-V22B-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and the capabilities required in the MV-22B, the following designations remain in effect:

Naval Aviator
Tiltrotor Second Pilot

2. Upon receipt of this letter, appropriate entries will be made in your Aircrew Performance Record, and NATOPS Qualification Jacket.

(b)(6) (b)(3) 10 U.S. Code § 130b

Copy to:
S-3
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR TRAINING SQUADRON 204
MARINE AIRCRAFT GROUP 26
PSC BOX 21018
JACKSONVILLE, NC 28545

3710
DSSN
20 Jan 15

From: Commanding Officer, Marine Medium Tiltrotor Training Squadron 204
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: DESIGNATION

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.11D
(c) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated as a Tiltrotor Second Pilot (T2P).

2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.

(b)(6) (b)(3) 10 USC 130b

Copy to:
Operations/APR
Logbook entry
S-1



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO:
3710
DSS
8 Jun 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: QUALIFICATION

Ref: (a) OPNAVINST 3710.7 Series
(b) NAVMC 3500.14 Series
(c) NAVMC 3500.11 Series
(d) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and the capabilities required in the MV-22B, the following qualification is in effect:

| Qualification | Effective Date |
|--|----------------|
| LOW ALTITUDE TACTICS | 18 Jul 15 |
| NIGHT SYSTEMS QUALIFIED HIGH LIGHT LEVEL | 17 Dec 15 |
| NIGHT SYSTEMS QUALIFIED LOW LIGHT LEVEL | 8 Jun 16 |

2. Upon receipt of this letter, appropriate entries will be made in your Aviator's Flight Log Book, Aircrew Performance Record, and NATOPS Training/Qualification Jacket. (b)(6) (b)(3) 10 USC 130b

Copy to:
Operations/APR
DSS

SECTION 11A - FLIGHT PERSONNEL DESIGNATION RECORD

SSN

[illegible]

SECTION IIB - MISSION QUALIFICATION RECORD

(b)(6) (b)(3) 10 U.S. Code §
130b

SSN

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
DSS
12 Dec 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: QUALIFICATIONS

Ref: (a) CNAF M-3710.7 SERIES
(b) NAVMC 3500.14 SERIES
(c) NAVMC 3500.11 SERIES
(d) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and the capabilities required in the MV-22B, the following qualification is in effect:

| Qualification | Effective Date |
|--|----------------|
| LOW ALTITUDE TACTICS | 12 Dec 16 |
| NIGHT SYSTEMS QUALIFIED HIGH LIGHT LEVEL | N/A |
| NIGHT SYSTEMS QUALIFIED LOW LIGHT LEVEL | N/A |
| CARRIER QUALIFIED | N/A |

2. Upon receipt of this letter, appropriate entries will be made in your Aviator's Flight Log Book, Aircrew Performance Record, and NATOPS Training/Qualification Jacket.

(b)(6) (b)(3) 10 USC 130b

Copy to:
Operations/APR
DSS

SECTION IIA - FLIGHT PERSONNEL DESIGNATION RECORD

EDIPI (b)(6) (b)(3) 10 U.S.
Code § 130b

[illegible]

OPNAV 3750/32D (4-81) SN 0107-LF-736-215D

NAME (Last, first, middle initial) (b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code §
130b

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239

IN REPLY REFER TO
3710
CO
3 Jun 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: PREVIOUSLY HELD DESIGNATIONS AND QUALIFICATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14D
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22B-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following designations remain in effect:

Crew Chief

2. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following qualifications remain in effect:

Low Altitude Tactics Qualified
Night Systems Qualified High Light Level

3. Upon receipt of this letter, appropriate entries will be made in your NATOPS Qualification Jacket and Aircraft (b)(6) (b)(3) 10 USC 130b

Copy to:
S-3



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
25 May 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: Distribution List

Subj: FLIGHT EVENT DEFERRAL IN CASE OF:

(b)(6)(b)(3) 10 U.S. Code § 130b

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.11D CHAPTER THREE
(c) NAVMC 3500.14D TRAINING AND READINESS PROGRAM MANUAL

1. Per the references and due to operational constraints, the following flight event is deferred.

| <u>T&R Code</u> | <u>Description</u> | <u>Refly Interval</u> |
|---------------------|------------------------|-----------------------|
| 2832 | Ground Threat Reaction | 365 |

2. This event will be completed when training opportunities become available, otherwise this deferral will expire 365 days after approval.

3. This letter will be filed and maintained as a permanent part of the aircrew member's Aircrew Performance Report (b)(6)(b)(3) 10 USC 130b

Copy to:
NATOPS
S-3



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
25 May 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: Distribution List

Subj: FLIGHT EVENT DEFERRAL FOR NIGHT MOUNTAINOUS AREA TRAINING

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.11D CHAPTER THREE
(c) NAVMC 3500.14D TRAINING AND READINESS PROGRAM MANUAL

1. Per the references and due to operational constraints, Night Mountainous Area Training (MAT-2733) flight is deferred for the following aircrew:

| Rank | Name | EDIPI |
|-----------------------------------|------|-------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | | |

2. This event will be completed when training opportunities become available, otherwise this deferral will expire 365 days after approval.

3. This letter will be filed and maintained as a permanent part of the aircrew member's Aircrew Performance Record.

(b) (6) b (3) 10 USC
130b

Copy to:
NATOPS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
25 May 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: Distribution List

Subj: FLIGHT EVENT DEFERRAL FOR DAY MOUNTAINOUS AREA TRAINING

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.11D CHAPTER THREE
(c) NAVMC 3500.14D TRAINING AND READINESS PROGRAM MANUAL

1. Per the references and due to operational constraints, Day Mountainous Area Training (MAT-2732) flight is deferred for the following aircrew:

| Rank | Name | EDIPI |
|-----------------------------------|------|-------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | | |

2. This event will be completed when training opportunities become available, otherwise this deferral will expire 365 days after approval.

3. This letter will be filed and maintained as a permanent part of the aircrew member's Aircrew Performance (b)(6) (b)(3) 10 USC 130b

Copy to:
NATOPS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265 (REIN)
31ST MARINE EXPEDITIONARY UNIT
III MARINE EXPEDITIONARY FORCE
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
4 May 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265 (REIN)
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: NIGHT SYSTEMS QUALIFIED (LLL)

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14C
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22AB-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following qualifications are in effect:

| Qualification | Effective Date |
|--|----------------|
| LOW ALTITUDE TACTICS | 10 Mar 15 |
| NIGHT SYSTEMS QUALIFIED (HIGH LIGHT LEVEL) | 23 Nov 15 |
| NIGHT SYSTEMS QUALIFIED (LOW LIGHT LEVEL) | 4 May 16 |

2. Upon receipt of this letter, appropriate entries will be made in your Aviator's Flight Log Book, Aircrew Performance Record, and NATOPS Training/Qualification Jacket.

(b) (6) b (3) 10 USC
130b

Copy to:
S-3
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239

IN REPLY REFER TO
3710
CO
3 Jun 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: NIGHT SYSTEMS QUALIFIED (LLL)

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14D
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22AB-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following qualifications are in effect:

| Qualification | Effective Date |
|--|----------------|
| LOW ALTITUDE TACTICS | 10 Mar 15 |
| NIGHT SYSTEMS QUALIFIED (HIGH LIGHT LEVEL) | 23 Nov 15 |
| NIGHT SYSTEMS QUALIFIED (LOW LIGHT LEVEL) | 4 May 16 |

2. Upon receipt of this letter, appropriate entries will be made in your Aviator's Flight Log Book, Aircrew Performance Record, and NATOPS Training/Qualification Jacket.

(b)(6) (b)(3) 10 USC 130b

Copy to:
S-3
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239

IN REPLY REFER TO
3710
CO
21 Nov 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: BASIC INSTRUCTOR CREW CHIEF DESIGNATION

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14D
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22B-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following designations are in effect:

| Designation | Effective Date |
|-----------------------------|----------------|
| CREW CHIEF | 21 Nov 14 |
| BASIC INSTRUCTOR CREW CHIEF | 21 Nov 16 |

2. Upon receipt of this letter, appropriate entries will be made in your Aviators Flight Log Book, Aircrew Performance Record, and NATOPS Training/Qualification Jacket.

(b)(6) (b)(3) 10 USC 130b

Copy to:
S-3
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
30 Jun 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: NIGHT SYSTEMS QUALIFIED (LOW LIGHT LEVEL)

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14D
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22B-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following qualifications are in effect:

| Qualification | Effective Date |
|--|----------------|
| LOW ALTITUDE TACTICS | 27 May 16 |
| NIGHT SYSTEMS QUALIFIED (HIGH LIGHT LEVEL) | 15 Jun 16 |
| NIGHT SYSTEMS QUALIFIED (LOW LIGHT LEVEL) | 30 Jun 16 |

2. Upon receipt of this letter, appropriate entries will be made in your Aviator's Flight Log Book, Aircrew Performance Record, and NATOPS Training/Qualification Jacket.

(b) (6) b (3) 10 USC 130b

Copy to:
S-3
DSS



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
7 Jul 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: Distribution List

Subj: FLIGHT EVENT DEFERRAL IN CASE OF:

(b)(6) (b)(3) 10 U.S. Code § 130b

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.11D CHAPTER THREE
(c) NAVMC 3500.14D TRAINING AND READINESS PROGRAM MANUAL

1. Per the references and due to operational constraints, the following flight event is deferred.

| <u>T&R Code</u> | <u>Description</u> | <u>Refly Interval</u> |
|---------------------|------------------------|-----------------------|
| 2832 | Ground Threat Reaction | 365 |

2. This event will be completed when training opportunities become available, otherwise this deferral will expire 365 days after approval.

3. This letter will be filed and maintained as a permanent part of the aircrew member's Aircrew Performance Report (b)(6) (b)(3) 10 USC 130b

Copy to:
NATOPS
S-3

SECTION IIA - FLIGHT PERSONNEL DESIGNATION RECORD

EDIFI

[illegible]



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265
MARINE AIRCRAFT GROUP 36
1ST MARINE AIRCRAFT WING
UNIT 37239

IN REPLY REFER TO
3710
CO
3 Jun 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: PREVIOUSLY HELD DESIGNATIONS AND QUALIFICATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14D
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22B-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following designations remain in effect:

Crew Chief

2. Upon receipt of this letter, appropriate entries will be made in your NATOPS Qualification Jacket and Aircrew (b)(6) (b)(3) 10 USC 130b

Copy to:
S-3



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR SQUADRON 265 (REIN)
31ST MARINE EXPEDITIONARY UNIT
III MARINE EXPEDITIONARY FORCE
UNIT 37239
FPO AP 96372-7239

IN REPLY REFER TO
3710
CO
30 Mar 16

From: Commanding Officer, Marine Medium Tiltrotor Squadron 265 (REIN)
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: PREVIOUSLY HELD DESIGNATIONS AND QUALIFICATIONS

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.14C
(c) NAVMC 3500.11D
(d) NAVAIR A1-V22B-NFM-000

1. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following designations remain in effect:

Crew Chief

2. Per the references and having demonstrated the knowledge, proficiency, and capabilities required in the MV-22B, the following qualifications remain in effect:

3. Upon receipt of this letter, appropriate entries will be made in your NATOPS Qualification Jacket and Aircrew Performance Record.

(b) (6) b (3) 10 USC
130b

Copy to:
S-3



UNITED STATES MARINE CORPS
MARINE MEDIUM TILTROTOR TRAINING SQUADRON 204
MARINE AIRCRAFT GROUP 26
POSTAL SERVICE CENTER BOX 21018
JACKSONVILLE, NC 28545

IN REPLY REFER TO:
3710
DSS
16 FEB 16

From: Commanding Officer, Marine Medium Tiltrotor Training Squadron 204
To: (b)(6) (b)(3) 10 U.S. Code § 130b

Subj: DESIGNATION

Ref: (a) OPNAVINST 3710.7U
(b) NAVMC 3500.11D
(c) A1-V22AB-NFM-000

1. Per the references, and having demonstrated the knowledge, proficiency, and capabilities in the MV-22B tiltrotor, you are hereby designated as a Crew Chief.
2. This letter will be maintained in your NATOPS Jacket until superseded or cancelled by subsequent correspondence.



Copy to:
Operations/APR
Logbook entry

BRNAV 3760/32D (4-31) SN.0167-LF-736-2150

SECTION IIB - MISSION QUALIFICATION RECORD

NAME (Last, first, middle initial)

EDIPF

[illegible]

Event Proficiency for VMM-265 - As Of: 12/21/2016 Expiration Date
Personnel Group: MV-22B Pilots

Days Until Expired >= 90 days 60-89 Days 30-59 Days < 30 Days Expired

Asterisk (*) indicates augmenting or temporarily assigned to another unit. No readiness contribution.

| | Air to Air Refueling (AAR(2)) | | | | |
|-----------------------------------|-------------------------------|----------|------------|----------|------------|
| | 2410 | 2430 | 2431 | 2432 | 2433 |
| (b)(6) (b)(3) 10 U.S. Code § 130b | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017* |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 11/15/2017 | NO REFLY | 11/15/2017 |
| | NO REFLY | NO REFLY | 11/15/2017 | NO REFLY | 11/15/2017 |
| | NO REFLY | NO REFLY | 7/20/2017 | NO REFLY | 10/19/2016 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 12/8/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 10/20/2017 | NO REFLY | 10/18/2017 |
| | NO REFLY | NO REFLY | 7/19/2017 | NO REFLY | 6/29/2017 |
| | NO REFLY | NO REFLY | 11/15/2017 | NO REFLY | 11/15/2017 |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |
| | NO REFLY | NO REFLY | 10/5/2017 | NO REFLY | 11/23/2016 |
| | NO REFLY | NO REFLY | 10/18/2017 | NO REFLY | 10/18/2017 |
| | NO REFLY | NO REFLY | 12/12/2017 | NO REFLY | |
| | NO REFLY | NO REFLY | 11/4/2017 | NO REFLY | 11/4/2017 |

Event Proficiency Audit For 2431

| Code | Proficiency | Expire | Environmental | Reason | FLT / SIM |
|------|-------------|------------|---------------|-------------------------|-----------|
| 2431 | 10/5/2016 | 10/5/2017 | Day | Logged | FLT |
| 2431 | 9/23/2016 | 9/23/2017 | Day | Logged | FLT |
| 2431 | 7/20/2016 | 7/20/2017 | Day | Logged | FLT |
| 2431 | 7/19/2016 | 7/19/2017 | Day | Logged | FLT |
| 2431 | 11/24/2015 | 11/23/2016 | HLL | Chain Updated from 2433 | FLT |
| 2431 | 5/31/2015 | 5/30/2016 | Day | Logged | FLT |
| 2431 | 5/27/2015 | 5/26/2016 | Day | Logged | FLT |



M-SHARP

Dashboard Main Scheduling Reports Setup T&R Help LogOff

Event Proficiency Audit For 2433

| Code | Proficiency | Expire | Environmental | Reason | FLT / SIM |
|------|-------------|------------|---------------|--------|-----------|
| 2433 | 11/24/2015 | 11/23/2016 | HLL | Logged | FLT |

Event Proficiency Audit For 2431

| Code | Proficiency | Expire | Environmental | Reason | FLT / SIM |
|------|-------------|------------|---------------|-------------------------|-----------|
| 2431 | 11/4/2016 | 11/4/2017 | LLL | Chain Updated from 2433 | FLT |
| 2431 | 10/18/2016 | 10/18/2017 | HLL | Chain Updated from 2433 | FLT |
| 2431 | 10/5/2016 | 10/5/2017 | Day | Logged | FLT |
| 2431 | 9/26/2016 | 9/26/2017 | Day | Logged | FLT |
| 2431 | 1/27/2016 | 1/26/2017 | Day | Logged | SIM |
| 2431 | 12/22/2015 | 12/21/2016 | Day | Chain Updated from 2433 | N/A |
| 2431 | 11/10/2015 | 11/9/2016 | Day | Logged | FLT |
| 2431 | 11/2/2015 | 11/1/2016 | Day | Logged | FLT |
| 2431 | 1/7/2015 | 1/7/2016 | HLL | Logged | FLT |
| 2431 | 11/18/2014 | 11/18/2015 | LLL | Chain Updated from 2433 | FLT |
| 2431 | 4/23/2014 | 4/23/2015 | LLL | Chain Updated from 2433 | FLT |
| 2431 | 3/19/2014 | 3/19/2015 | Day | Logged | FLT |
| 2431 | 3/14/2014 | 3/14/2015 | Day | Logged | FLT |
| 2431 | 7/24/2013 | 7/24/2014 | Day | Logged | FLT |
| 2431 | 7/19/2013 | 7/19/2014 | Day | Chain Updated from 2433 | FLT |
| 2431 | 7/5/2013 | 7/5/2014 | Day | Chain Updated from 2433 | FLT |
| 2431 | 2/20/2013 | 2/20/2014 | Day | Logged | FLT |

Event Proficiency Audit For **2433**

| Code | Proficiency | Expire | Environmental | Reason | FLT / SIM |
|------|-------------|------------|---------------|----------|-----------|
| 2433 | 11/4/2016 | 11/4/2017 | LLL | Logged | FLT |
| 2433 | 10/18/2016 | 10/18/2017 | HLL | Logged | FLT |
| 2433 | 12/22/2015 | 12/21/2016 | Day | Baseline | N/A |
| 2433 | 11/18/2014 | 11/18/2015 | LLL | Logged | FLT |
| 2433 | 4/23/2014 | 4/23/2015 | LLL | Logged | FLT |
| 2433 | 7/19/2013 | 7/19/2014 | Day | Logged | FLT |
| 2433 | 7/5/2013 | 7/5/2014 | Day | Logged | FLT |

| Day | Model | BUNO | TPT | FPT | CPT | ACDR | SCT | COMBAT | HLL | LLL | FWNVG | Total NVG | ACT | SIM | BASE LINE | Is Sim | NITE | PA | NPA | PS | NPS | T&R Code(s) |
|---------------------|--------|--------|-----|-----|-----|------|-----|--------|-----|-----|-------|-----------|-----|-----|-----------|--------|------|----|-----|----|-----|--|
| 12/17/2015 8:50 PM | MV-22B | 168032 | 0.7 | 0.3 | 0.4 | 0 | 0 | 0 | 0.7 | 0 | 0 | 0.7 | 0.2 | 0.2 | 0 | 0 | 0.7 | 0 | 0 | 0 | 0 | 2336, 6033 |
| 12/22/2015 2:15 PM | MV-22B | 168220 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2181, 2931 |
| 1/13/2016 8:20 AM | MV-22B | 168028 | 0.6 | 0.3 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 1/20/2016 6:45 PM | MV-22B | 168217 | 1.2 | 1 | 0.2 | 0 | 0 | 0 | 1.2 | 0 | 0 | 1.2 | 0 | 0.5 | 0 | 0 | 1.2 | 0 | 0 | 0 | 0 | 2934 |
| 1/28/2016 12:08 PM | MV-22B | 168028 | 1.5 | 0.8 | 0.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 2/9/2016 4:30 PM | MV-22B | 168217 | 4.2 | 2.1 | 2.1 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2535, 2934 |
| 2/11/2016 11:30 AM | MV-22B | 168217 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2133, 2932 |
| 2/12/2016 12:30 PM | MV-22B | 168031 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2133, 2932 |
| 2/16/2016 11:30 AM | MV-22B | 168217 | 0.7 | 0.4 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2932 |
| 2/17/2016 8:00 AM | MV-22B | 168221 | 1 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2932 |
| 2/20/2016 10:05 AM | MV-22B | 168031 | 0.9 | 0.5 | 0.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 2/20/2016 4:00 PM | MV-22B | 168220 | 0.3 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 2/22/2016 1:45 PM | MV-22B | 168031 | 3.4 | 1.7 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2932 |
| 2/26/2016 12:00 PM | MV-22B | 168031 | 5.3 | 2.7 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.2 | 0.5 | 0 | 0 | 0.5 | 0 | 0 | 0 | 2 | 2030, 2132, 2932 |
| 3/2/2016 11:00 AM | MV-22B | 168220 | 0.2 | 0.1 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 3/14/2016 11:30 AM | MV-22B | 168218 | 2.1 | 1.1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2932 |
| 3/17/2016 12:00 PM | MV-22B | 168032 | 4.4 | 2.2 | 2.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2181, 2932 |
| 3/22/2016 8:00 AM | MV-22B | 168223 | 1.5 | 0.7 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 3/31/2016 1:15 PM | MV-22B | 168216 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2031, 2133, 2135 |
| 4/5/2016 7:00 PM | MV-22B | 168027 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0.5 | 0 | 0 | 3 | 1 | 1 | 5 | 0 | 2031, 2381 |
| 4/12/2016 12:30 PM | MV-22B | 168027 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2181 |
| 4/14/2016 3:45 PM | MV-22B | 168027 | 1 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132 |
| 4/17/2016 10:00 AM | MV-22B | 168220 | 2.5 | 1.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2181 |
| 4/18/2016 3:30 PM | MV-22B | 168220 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030, 2181 |
| 4/20/2016 1:45 PM | MV-22B | 168220 | 2.5 | 1.3 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 4/25/2016 1:25 PM | MV-22B | 168221 | 2.5 | 1.3 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2031, 2181 |
| 4/27/2016 8:00 PM | MV-22B | 168224 | 1 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.2 | 0.3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2381 |
| 5/17/2016 3:45 PM | MV-22B | 168223 | 1.7 | 0.9 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4032 |
| 5/19/2016 10:30 AM | MV-22B | 168028 | 0.5 | 0.3 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2030 |
| 5/20/2016 11:30 AM | MV-22B | 168031 | 3.5 | 1.8 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1.5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2132, 2181 |
| 6/8/2016 7:00 PM | MV-22B | 168218 | 3.5 | 1.7 | 1.8 | 0 | 0 | 0 | 0.5 | 3 | 0 | 3.5 | 0 | 1.7 | 0 | 0 | 3.5 | 0 | 0 | 0 | 0 | 2384, 2385 |
| 6/28/2016 7:30 PM | MV-22B | 168218 | 3.3 | 1.6 | 1.7 | 0 | 0 | 0 | 0 | 3.3 | 0 | 3.3 | 0.5 | 0.5 | 0 | 0 | 3.3 | 0 | 0 | 0 | 0 | 2382, 2535 |
| 7/6/2016 3:00 PM | MV-22B | 168218 | 1.6 | 0.8 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132 |
| 7/14/2016 3:45 PM | MV-22B | 168032 | 3.3 | 1.6 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2133 |
| 7/19/2016 9:30 AM | MV-22B | 168216 | 4.8 | 2.4 | 2.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2136, 2181, 2431, 3220 |
| 7/20/2016 10:00 AM | MV-22B | 168224 | 5.4 | 2.7 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2136, 2181, 2431, 3030, 3214, 3215, 3216, 3230, 3330 |
| 7/29/2016 10:50 AM | MV-22B | 168224 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2181 |
| 7/31/2016 11:55 AM | MV-22B | 168220 | 1.6 | 0.8 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2133, 2135 |
| 8/4/2016 10:30 AM | MV-22B | 168216 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2133, 2135, 2832, 3330, 4220 |
| 8/7/2016 11:05 AM | MV-22B | 168032 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2133, 2135, 3230 |
| 8/11/2016 4:30 PM | MV-22B | 168028 | 3.5 | 1.7 | 1.8 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1.5 | 1.5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2136, 2181 |
| 8/22/2016 10:40 AM | MV-22B | 168031 | 0.5 | 0.2 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 8/23/2016 2:55 PM | MV-22B | 168221 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135 |
| 8/24/2016 10:00 AM | MV-22B | 168218 | 2.5 | 1.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2181 |
| 8/25/2016 12:00 PM | MV-22B | 168218 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2181 |
| 8/27/2016 2:00 PM | MV-22B | 168220 | 0.3 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2030 |
| 8/29/2016 11:45 AM | MV-22B | 168220 | 4.5 | 2.2 | 2.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2181 |
| 8/31/2016 4:00 PM | MV-22B | 168219 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 3230, 3330, 3430 |
| 9/23/2016 12:20 PM | MV-22B | 168217 | 6.7 | 3.4 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.5 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2181, 2431 |
| 9/25/2016 12:00 PM | MV-22B | 168219 | 3.5 | 1.8 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135 |
| 9/28/2016 11:15 AM | MV-22B | 168219 | 3.8 | 1.9 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2135, 3230, 3330, 3430 |
| 9/30/2016 7:15 AM | MV-22B | 168217 | 3.1 | 1.6 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2135 |
| 10/5/2016 12:05 PM | MV-22B | 168219 | 5.2 | 2.6 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2181, 2431 |
| 10/21/2016 12:00 PM | MV-22B | 168031 | 2.7 | 1.3 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2135, 3230, 3330 |
| 10/27/2016 6:42 PM | MV-22B | 168027 | 1.6 | 1.4 | 0.2 | 0 | 0 | 0 | 0 | 1.6 | 0 | 1.6 | 0.5 | 0.5 | 0 | 0 | 1.6 | 0 | 0 | 0 | 0 | 2382, 2631, 3530, 4030 |
| 10/31/2016 8:30 AM | MV-22B | 168223 | 3.8 | 1.9 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132 |
| 11/4/2016 12:15 PM | MV-22B | 168634 | 8.8 | 4.4 | 4.4 | 0 | 0 | 0 | 0 | 4.4 | 0 | 4.4 | 2.4 | 2 | 0 | 0 | 4.4 | 0 | 0 | 0 | 0 | 2133, 2136, 3231, 3232 |
| 11/17/2016 2:15 PM | MV-22B | 168220 | 1.4 | 0.7 | 0.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2133, 2135, 2532 |
| 11/22/2016 3:30 PM | MV-22B | 168633 | 3.5 | 1.8 | 1.7 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4032 |
| 12/2/2016 6:00 PM | MV-22B | 168028 | 2 | 1.7 | 0.3 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.5 | 0.5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2384, 2385, 6033 |

| Day | Model | BUNO | TPT | FPT | CPT | ACDR | SCT | COMBAT | HLL | LLL | FWNVG | Total NVG | ACT | SIM | BASE LINE | Is Sim | NITE | PA | NPA | PS | NPS | T&R Code(s) |
|---------------------|--------|--------|-----|-----|-----|------|-----|--------|-----|-----|-------|-----------|-----|-----|-----------|--------|------|----|-----|----|-----|--|
| 12/14/2015 11:30 AM | MV-22B | 168217 | 5.5 | 2.7 | 2.8 | 5.5 | 0 | 0 | 0 | 0 | 0 | 0 | 2.7 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2132 |
| 12/15/2015 2:00 PM | MV-22B | 168028 | 3 | 1.5 | 1.5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2181, 2233 |
| 12/21/2015 6:00 PM | MV-22B | 168217 | 2 | 1 | 1 | 0 | 0 | 0 | 1.7 | 0 | 0 | 1.7 | 0.3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2181, 2332, 2535 |
| 12/22/2015 6:00 PM | MV-22B | 168032 | 1.8 | 0.9 | 0.9 | 0 | 0 | 0 | 1.8 | 0 | 0 | 1.8 | 0.3 | 0 | 0 | 0 | 1.8 | 0 | 0 | 0 | 0 | 2332, 2335 |
| 1/12/2016 11:00 AM | MV-22B | 168028 | 1.1 | 0.5 | 0.6 | 1.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2030 |
| 1/22/2016 1:15 PM | MV-22B | 168223 | 0.9 | 0.5 | 0.4 | 0.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 1/25/2016 3:45 PM | MV-22B | 168223 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 | 0.5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2935 |
| 1/28/2016 12:05 PM | MV-22B | 168216 | 1.5 | 0.7 | 0.8 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 2/7/2016 9:30 PM | MV-22B | 168216 | 1.5 | 0.7 | 0.8 | 0 | 0 | 0 | 0 | 1.5 | 0 | 1.5 | 0 | 0 | 0 | 0 | 1.5 | 0 | 0 | 0 | 0 | 2935 |
| 2/12/2016 1:15 PM | MV-22B | 168223 | 5 | 2.5 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2136, 2932, 3230, 3233, 3330, 6331 |
| 2/13/2016 2:30 PM | MV-22B | 168031 | 3.3 | 1.6 | 1.7 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.7 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 2130, 2932 |
| 2/14/2016 5:15 PM | MV-22B | 168216 | 2 | 1 | 1 | 2 | 0 | 0 | 0.4 | 0 | 0 | 0.4 | 0.2 | 0.7 | 0 | 0 | 0.4 | 0 | 0 | 0 | 0 | 2935 |
| 2/15/2016 7:00 PM | MV-22B | 168027 | 2.5 | 1.2 | 1.3 | 0 | 0 | 0 | 2.5 | 0 | 0 | 2.5 | 0.8 | 0 | 0 | 0 | 2.5 | 0 | 3 | 0 | 0 | 2535, 2935 |
| 2/17/2016 3:30 PM | MV-22B | 168031 | 0.5 | 0.2 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 2/17/2016 5:20 PM | MV-22B | 168221 | 0.3 | 0.1 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 2/20/2016 5:10 PM | MV-22B | 168221 | 4.4 | 2.2 | 2.2 | 0 | 0 | 0 | 3.4 | 0 | 0 | 3.4 | 0.5 | 0.5 | 0 | 0 | 3.4 | 0 | 1 | 0 | 0 | 2331, 2935, 3230, 3233, 3330 |
| 2/22/2016 6:00 PM | MV-22B | 168220 | 0.3 | 0.1 | 0.2 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932, 4230 |
| 2/25/2016 3:30 PM | MV-22B | 168220 | 3.5 | 1.8 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0.8 | 0 | 0 | 0 | 0 | 2135, 2932, 3233 |
| 2/26/2016 12:02 PM | MV-22B | 168218 | 2.7 | 1.3 | 1.4 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932, 3330, 3430 |
| 2/29/2016 7:50 AM | MV-22B | 168224 | 1.3 | 0.6 | 0.7 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932 |
| 2/29/2016 12:25 PM | MV-22B | 168028 | 0.5 | 0.2 | 0.3 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2932 |
| 3/2/2016 10:00 AM | MV-22B | 168217 | 2.5 | 1.3 | 1.2 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2181, 6240, 6331 |
| 3/4/2016 2:00 PM | MV-22B | 168028 | 2.6 | 1.3 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2231 |
| 3/9/2016 11:15 AM | MV-22B | 168221 | 1 | 0.5 | 0.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2132 |
| 3/10/2016 2:00 PM | MV-22B | 168217 | 3.3 | 1.6 | 1.7 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2932 |
| 3/11/2016 9:00 AM | MV-22B | 168221 | 6.7 | 3.3 | 3.4 | 6.7 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2133, 2932, 4730 |
| 3/12/2016 10:13 AM | MV-22B | 168031 | 3.1 | 1.5 | 1.6 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2132, 2932 |
| 3/13/2016 9:45 AM | MV-22B | 168031 | 3.7 | 1.8 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2181, 2932 |
| 3/14/2016 9:45 AM | MV-22B | 168028 | 5.4 | 2.7 | 2.7 | 5.4 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0.3 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2132, 2133, 2932 |
| 3/15/2016 11:00 AM | MV-22B | 168217 | 5 | 0.3 | 4.7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2732 |
| 3/20/2016 11:45 AM | MV-22B | 168221 | 4.7 | 2.4 | 2.3 | 4.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2181, 2932, 6240 |
| 5/24/2016 12:15 PM | MV-22B | 168220 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2233, 2931 |
| 5/26/2016 5:45 PM | MV-22B | 168220 | 3.3 | 1.6 | 1.7 | 3.3 | 0 | 0 | 0.5 | 0.5 | 0 | 1 | 0 | 0.3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2132, 2331, 2380, 3330, 4130 |
| 6/1/2016 7:00 PM | MV-22B | 168220 | 1.5 | 0.8 | 0.7 | 0 | 0 | 0 | 0 | 0.7 | 0 | 0.7 | 0.8 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2181, 2382, 3233, 6320, 6321 |
| 6/8/2016 7:00 PM | MV-22B | 168219 | 3.5 | 1.7 | 1.8 | 0 | 0 | 0 | 0.5 | 3 | 0 | 3.5 | 0 | 0.5 | 0 | 0 | 3.5 | 0 | 0 | 0 | 0 | 2334, 2335, 2384, 2385, 3030, 3233, 6333 |
| 6/9/2016 7:30 PM | MV-22B | 168218 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1.5 | 0 | 1.5 | 0 | 0.5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2381, 4034 |
| 6/10/2016 7:00 PM | MV-22B | 168223 | 3.3 | 1.7 | 1.6 | 0 | 0 | 0 | 3.3 | 0 | 0 | 3.3 | 0 | 0.3 | 0 | 0 | 3.3 | 0 | 0 | 0 | 0 | 2332, 2535 |
| 6/16/2016 7:45 PM | MV-22B | 168027 | 2.5 | 1.2 | 1.3 | 2.5 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0.3 | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 2132, 2934 |
| 6/21/2016 8:00 PM | MV-22B | 168218 | 3 | 1.5 | 1.5 | 3 | 0 | 0 | 3 | 0 | 0 | 3 | 0.3 | 0.5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2331, 2332, 2336, 6033 |
| 6/23/2016 3:00 PM | MV-22B | 168032 | 3.3 | 1.7 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2631, 3233, 3330, 3430, 3530, 4030 |
| 6/24/2016 11:30 AM | MV-22B | 168027 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2031 |
| 6/27/2016 7:42 PM | MV-22B | 168219 | 3.3 | 1.6 | 1.7 | 3.3 | 0 | 0 | 0 | 3.3 | 0 | 3.3 | 0.3 | 0.5 | 0 | 0 | 3.3 | 0 | 0 | 0 | 0 | 2382, 2385, 3230, 6240 |
| 6/28/2016 7:30 PM | MV-22B | 168219 | 3.3 | 1.7 | 1.6 | 3.3 | 0 | 0 | 0 | 3.3 | 0 | 3.3 | 0.5 | 0.5 | 0 | 0 | 3.3 | 0 | 0 | 1 | 0 | 2382, 2535, 6240 |
| 6/30/2016 8:00 PM | MV-22B | 168219 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 1.5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2384, 5933 |
| 7/7/2016 7:30 PM | MV-22B | 168224 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 2.5 | 0 | 2.5 | 0 | 0.5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2381, 2934, 4034, 5931 |
| 7/12/2016 7:45 PM | MV-22B | 168027 | 1.4 | 0.7 | 0.7 | 0 | 0 | 0 | 1.1 | 0 | 0 | 1.1 | 0 | 0.3 | 0 | 0 | 1.4 | 0 | 0 | 0 | 0 | 2331, 4034 |
| 7/13/2016 7:30 PM | MV-22B | 168220 | 3.5 | 1.7 | 1.8 | 0 | 0 | 0 | 3.3 | 0 | 0 | 3.3 | 0.2 | 0 | 0 | 0 | 3.5 | 0 | 0 | 0 | 0 | 2135, 2233 |
| 7/15/2016 9:00 AM | MV-22B | 168028 | 3.5 | 1.8 | 1.7 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2135, 2233, 6240 |
| 7/20/2016 7:30 PM | MV-22B | 168219 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 2.5 | 0 | 0 | 2.5 | 0 | 0.3 | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 2331, 2334 |
| 7/22/2016 9:30 AM | MV-22B | 168216 | 3.3 | 1.7 | 1.6 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2135, 2233, 6240 |
| 7/31/2016 8:30 AM | MV-22B | 168224 | 2.5 | 1.2 | 1.3 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2133, 2135 |
| 8/1/2016 7:00 PM | MV-22B | 168224 | 3 | 1.5 | 1.5 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0.5 | 0.5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2384, 2934 |
| 8/4/2016 9:50 PM | MV-22B | 168027 | 1.4 | 0.7 | 0.7 | 0 | 0 | 0 | 0 | 1.4 | 0 | 1.4 | 0 | 0 | 0 | 0 | 1.4 | 0 | 0 | 0 | 0 | 2934 |
| 8/5/2016 7:15 PM | MV-22B | 168223 | 3.5 | 1.8 | 1.7 | 0 | 0 | 0 | 0 | 3.5 | 0 | 3.5 | 0 | 1 | 0 | 0 | 3.5 | 0 | 0 | 0 | 0 | 2133, 2384, 4034, 5934, 5935 |
| 8/12/2016 12:00 PM | MV-22B | 168218 | 0.8 | 0.4 | 0.4 | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2030 |
| 8/16/2016 4:30 PM | MV-22B | 168028 | 2.3 | 1.1 | 1.2 | 2.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2932, 6240 |
| 8/22/2016 10:40 AM | MV-22B | 168031 | 0.5 | 0.3 | 0.2 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 8/24/2016 5:00 PM | MV-22B | 168219 | 0.5 | 0.5 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 9/9/2016 12:00 PM | MV-22B | 168217 | 0.3 | 0.2 | 0.1 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 9/16/2016 4:30 PM | MV-22B | 168634 | 2.5 | 1.3 | 1.2 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 1 | 0 | 0 | 0.5 | 0 | 1 | 0 | 0 | 2030 |
| 9/26/2016 10:30 AM | MV-22B | 168219 | 4.5 | 2.3 | 2.2 | 4.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2431, 3230, 3330, 3430, 6240 |
| 10/5/2016 12:05 PM | MV-22B | 168219 | 5.2 | 2.6 | 2.6 | 5.2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2181, 2431, 6340 |
| 10/12/2016 6:50 PM | MV-22B | 168217 | 3 | 0.2 | 2.8 | 3 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 2332, 2336, 6033, 6340 |
| 10/13/2016 6:15 PM | MV-22B | 168217 | 3.8 | 1.9 | 1.9 | 3.8 | 0 | 0 | 3.8 | 0 | 0 | 3.8 | 2 | 0.5 | 0 | 0 | 3.8 | 0 | 0 | 0 | 0 | 2335, 6033 |
| 10/18/2016 6:40 PM | MV-22B | 168223 | 1.1 | 1 | 0.1 | 0 | 0 | 0 | 0.1 | 1 | 0 | 1.1 | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--------|--------|-----|-----|-----|-----|---|---|-----|-----|---|-----|-----|-----|-----|---|-----|-----|---|---|---|--|
| 10/20/2016 2:15 PM | MV-22B | 168634 | 0.3 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 10/21/2016 12:00 PM | MV-22B | 168223 | 5.5 | 1.5 | 4 | 5.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.5 | 0 | 0 | 0 | 0 | 0 | 3 | 2135, 3230, 3330, 3530, 6240 |
| 10/26/2016 6:45 PM | MV-22B | 168027 | 3.3 | 0.3 | 3 | 3.3 | 0 | 0 | 0 | 3.3 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 3.3 | 0 | 0 | 0 | 2385, 6340 |
| 10/27/2016 3:00 PM | MV-22B | 168027 | 3 | 1.5 | 1.5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2135, 2631, 3530, 4030, 6240 |
| 10/31/2016 9:15 AM | MV-22B | 168027 | 3 | 1.5 | 1.5 | 3 | 0 | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0.5 | 0 | 0 | 0.1 | 0 | 0 | 0 | 0 | 2135, 3231, 3233, 3330, 6240 |
| 11/1/2016 10:20 AM | MV-22B | 168216 | 3 | 1.5 | 1.5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2132 |
| 11/4/2016 12:05 PM | MV-22B | 168028 | 8.9 | 4.4 | 4.5 | 8.9 | 0 | 0 | 0 | 4 | 0 | 4 | 0.1 | 4.4 | 0 | 0 | 4.7 | 0 | 0 | 0 | 0 | 2133, 2136, 2385, 2433, 3231, 3232, 6033, 6340 |
| 11/17/2016 6:15 PM | MV-22B | 168028 | 3.5 | 1.3 | 2.2 | 3.5 | 0 | 0 | 1.1 | 2.4 | 0 | 3.5 | 1 | 1 | 0 | 0 | 3.5 | 0 | 0 | 0 | 0 | 2181, 2382, 2384, 6240 |
| 11/21/2016 6:00 PM | MV-22B | 168221 | 4 | 1 | 3 | 4 | 0 | 0 | 0 | 4 | 0 | 4 | 0.5 | 0.5 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 2382, 2385, 6033, 6340 |
| 12/2/2016 6:00 PM | MV-22B | 168031 | 3.6 | 1.8 | 1.8 | 3.6 | 0 | 0 | 0 | 3.5 | 0 | 3.5 | 0 | 1 | 0 | 0 | 3.5 | 0 | 0 | 0 | 0 | 2384, 2385 |
| 12/8/2016 8:30 AM | MV-22B | 168220 | 7.5 | 3.7 | 3.8 | 7.5 | 0 | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 2 | 0 | 0 | 0.1 | 0 | 0 | 0 | 1 | 2136, 2181, 3230, 3232, 3233, 3330, 3430, 6340, 6430 |

| | | Formation (FORM(1)) | | | | | | Low Altitude Training (LAT(2)) | | | | |
|--------|-----------|---------------------|------------|-----------|------------|------------|------------|--------------------------------|------------|------------|------------|------------|
| 35 | 2136 | 2160 | 2161 | 2180 | 2181 | 2182 | 2183 | 2210 | 2211 | 2212 | 2220 | 2230 |
| 2016 | 12/8/2016 | 8/30/2012 | 8/30/2012 | 12/2/2016 | 12/8/2016 | 12/8/2016 | 11/29/2016 | 9/5/2012 | 9/5/2012 | 9/5/2012 | 8/28/2012 | 12/10/2014 |
| 2016 | 12/2/2016 | 3/17/2015 | 3/17/2015 | 12/2/2016 | 11/23/2016 | 12/2/2016 | 11/29/2016 | 3/17/2015 | 3/17/2015 | 3/17/2015 | 3/27/2015 | 3/27/2015 |
| 1/2016 | 12/8/2016 | 11/4/2016 | 10/17/2016 | 11/9/2016 | 12/6/2016 | 12/12/2016 | 12/2/2016 | 11/15/2016 | 11/14/2016 | 11/14/2016 | 11/15/2016 | 11/15/2016 |

| Night Systems - High Light Level (NSHLL(2)) | | | | | | | | | | | |
|---|------------|------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|------------|
| 31 | 2232 | 2233 | 2310 | 2311 | 2312 | 2313 | 2314 | 2330 | 2331 | 2332 | 2334 |
| 2016 | 11/7/2016 | 12/2/2016 | 8/29/2012 | 8/29/2012 | 8/31/2012 | 8/31/2012 | 8/31/2012 | 12/12/2016 | 12/2/2016 | 12/2/2016 | 11/4/2013 |
| 2016 | 4/6/2015 | 12/2/2016 | 3/18/2015 | 3/18/2015 | 3/18/2015 | 3/24/2015 | 3/24/2015 | 11/29/2016 | 12/2/2016 | 12/2/2016 | 7/11/2016 |
| /2016 | 11/16/2016 | 12/12/2016 | 12/5/2016 | 12/5/2016 | 12/5/2016 | 12/5/2016 | 12/5/2016 | 12/5/2016 | 12/8/2016 | 12/8/2016 | 12/12/2016 |

| Air to Air Refueling (AAR(2)) | | | | | | |
|-------------------------------|------------|-----------|----------|-----------|-----------|------------|
| 35 | 2336 | 2410 | 2430 | 2431 | 2432 | 2433 |
| 2016 | 10/12/2016 | 2/6/2013 | 2/6/2013 | 11/4/2016 | 3/26/2013 | 11/4/2016 |
| 2016 | 12/17/2015 | 3/19/2015 | 4/8/2016 | 10/5/2016 | 5/22/2015 | 11/24/2015 |
| | 12/8/2016 | | | | | |

ent Proficiency for VMM-265 - As Of: 12/13/2016 Proficiency Date

ays Until Expired: >= 90 days 60-89 Days 30-59 Days < 30 Days Expired

Asterisk (*) indicates augmenting or temporarily assigned to another unit. No readiness contribution.

| | Familiarixation | | | Confined Area Landings (CAL) | | | | Formation (FORM) | | | |
|---------------------|-----------------|-----------|------------|------------------------------|-----------|------------|------------|------------------|------------|------------|-----------|
| | 2012 | 2020 | 2032 | 2132 | 2133 | 2135 | 2136 | 2160 | 2182 | 2183 | 2210 |
| | 1/16/2015 | 1/16/2015 | 10/21/2016 | 12/12/2016 | 12/8/2016 | 12/12/2016 | 12/8/2016 | 1/16/2015 | 12/12/2016 | 11/21/2016 | 1/26/2015 |
| 10 (b)(3) U.S. Code | 4/15/2016 | 4/15/2016 | 10/20/2016 | 12/6/2016 | 11/4/2016 | 12/6/2016 | 11/21/2016 | 5/9/2016 | 12/6/2016 | 11/21/2016 | 5/26/2016 |

| Low Altitude Tactics (LAT) | | | | Night Systems (NS) | | | | | | |
|----------------------------|-----------|------------|------------|--------------------|-----------|------------|------------|------------|------------|------------|
| 11 | 2220 | 2231 | 2233 | 2310 | 2311 | 2331 | 2332 | 2334 | 2335 | 2336 |
| 2015 | 3/10/2015 | 12/12/2016 | 12/12/2016 | 3/13/2015 | 3/13/2015 | 11/22/2016 | 11/21/2016 | 11/17/2016 | 11/17/2016 | 10/12/2016 |
| 2016 | 5/26/2016 | 10/17/2016 | 9/1/2016 | 6/6/2016 | 6/6/2016 | 12/6/2016 | 12/6/2016 | 10/17/2016 | 9/1/2016 | 12/8/2016 |

| CREW | T2P | BIP | TAC | SL | DL | FL | AMC | FCP | FLSE | AAR I | TSI |
|-----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | 10/05/09 | 04/13/16 | 04/13/16 | | | | 06/10/10 | P | | 10/18/16 | |
| | 06/15/12 | 05/22/15 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | |
| | 10/30/13 | 06/15/15 | 05/14/15 | 11/09/15 | | | | 09/24/15 | | | |
| | 01/28/10 | 09/10/13 | 08/12/13 | 08/12/13 | 04/15/13 | 12/11/15 | 02/24/16 | 06/08/12 | C | 03/19/13 | 02/06/14 |
| | 10/20/15 | 06/14/16 | 10/20/15 | 05/01/12 | | | | 10/20/15 | | | |
| | 07/22/14 | 05/28/16 | 05/28/16 | P | | | | P | | | |
| | 04/14/15 | | | | | | | | | | |
| | 07/17/14 | 07/19/16 | 07/19/16 | P | | | | 09/19/16 | | | |
| | 06/03/14 | 02/06/16 | 02/06/16 | 09/20/16 | | | | 06/10/16 | | | |
| | 06/27/14 | 06/16/16 | 06/16/16 | P | | | | 09/19/16 | | | |
| | 12/13/11 | 10/13/13 | 11/29/13 | 07/14/16 | P | | | 12/20/13 | | | |
| | 08/06/12 | 08/11/15 | 10/31/14 | 03/12/15 | 06/08/16 | | | 07/23/15 | | 10/18/16 | |
| | 07/14/13 | 10/01/14 | 10/01/14 | 04/17/15 | 11/03/15 | 07/20/16 | | 12/04/14 | | 02/19/15 | |
| | 01/16/13 | 07/22/15 | 07/22/15 | 04/08/16 | | | | 01/08/16 | | P | |
| | 11/04/13 | 09/16/15 | 09/16/15 | 05/24/16 | 06/23/16 | C | | 11/25/15 | | | |
| | 01/20/15 | P | P | | | | | P | | | |
| | 01/20/15 | P | P | | | | | | | | |
| | 08/11/15 | | | | | | | | | | |
| | 02/17/15 | | | | | | | | | | |
| | 02/19/14 | 05/10/16 | 05/10/16 | P | | | | 08/24/16 | | | |
| | 09/20/16 | | | | | | | | | | |
| | 10/30/15 | | | | | | | | | | |
| | 08/31/16 | | | | | | | | | | |
| | 10/29/15 | | | | | | | | | | |
| | 05/01/16 | 12/06/14 | 04/22/15 | 03/19/15 | 05/01/15 | | 12/06/14 | | | | |
| | 09/17/12 | 01/04/13 | 02/18/13 | 09/21/13 | 05/20/14 | | 07/28/14 | 07/24/13 | | | |
| | 05/05/15 | 05/12/16 | 05/06/16 | | | | | 07/22/16 | | | |
| | 05/01/15 | 05/04/10 | 05/04/10 | 01/20/11 | 05/21/12 | 07/15/15 | | 05/13/10 | | 04/12/12 | |
| | 10/20/15 | 10/20/15 | 10/20/15 | | | | | | | | |
| | 02/05/10 | 03/16/14 | 05/18/11 | 12/17/13 | 05/01/12 | 10/15/12 | 10/18/13 | 08/11/11 | 10/10/13 | 08/28/12 | 03/11/14 |
| | 09/01/10 | | | | | | | | | | |
| | 08/12/15 | | | | | | | | | | |
| | 12/14/10 | 12/12/12 | 12/31/11 | 10/31/12 | 11/18/14 | | | 01/11/12 | | 08/21/12 | |

NEW

AEROMEDICAL

CRM CLASS

CRM FLIGHT

CRS RULES

EMERGENCY
EGRESS

FLIGHT PHYSICAL

INST CHECK

LASER SAFETY

NATOPS AUDIT

NATOPS CHECK

NVD LAB

(b)(6) (b)(3) 10 U.S. Code § 130b

| | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 11/30/2017 | 01/31/2017 | 07/31/2017 | 10/19/2020 | 07/31/2017 | 07/31/2017 | 06/30/2017 | 11/30/2017 | 05/31/2017 | 07/31/2017 | 11/30/2017 |
| 05/31/2017 | 01/31/2017 | 02/28/2017 | 04/30/2019 | 02/28/2017 | 07/31/2017 | 01/31/2017 | 05/31/2017 | 05/31/2017 | 02/28/2017 | 05/31/2017 |
| 05/31/2017 | 01/31/2017 | 05/31/2017 | 04/30/2019 | 05/31/2017 | 05/31/2017 | 09/30/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 |
| 01/31/2017 | 04/31/2017 | 02/28/2017 | 04/30/2019 | 02/28/2017 | 10/31/2017 | 11/30/2016 | 01/31/2017 | 05/31/2017 | 02/28/2017 | 06/30/2017 |
| 11/30/2017 | 01/31/2017 | 11/30/2016 | 04/30/2019 | 11/30/2016 | 05/31/2017 | 04/30/2017 | 11/30/2017 | 10/31/2017 | 11/30/2016 | 11/30/2017 |
| 05/31/2017 | 01/31/2017 | 05/31/2017 | 04/30/2019 | 05/31/2017 | 11/30/2017 | 06/30/2017 | 09/30/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 |
| 05/31/2017 | 01/31/2017 | 01/31/2017 | 05/01/2018 | 01/31/2017 | 10/31/2017 | 01/31/2017 | 05/31/2017 | 05/31/2017 | 01/31/2017 | 05/31/2017 |
| 09/30/2017 | 01/31/2017 | 06/30/2017 | 04/30/2019 | 06/30/2017 | 11/30/2017 | 05/31/2017 | 09/30/2017 | 05/31/2017 | 06/30/2017 | 08/30/2017 |
| 05/31/2017 | 01/31/2017 | 12/31/2016 | 04/30/2019 | 12/31/2016 | 09/30/2017 | 05/31/2017 | 01/31/2017 | 05/31/2017 | 12/31/2016 | 05/31/2017 |
| 05/31/2017 | 01/31/2017 | 05/31/2017 | 04/30/2019 | 05/31/2017 | 12/31/2016 | 06/30/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 |
| 10/31/2017 | 01/31/2017 | 09/30/2017 | 09/21/2019 | 09/30/2017 | 09/30/2017 | 12/31/2016 | 01/31/2017 | 09/30/2017 | 09/30/2017 | 10/31/2018 |
| 11/30/2017 | 01/31/2017 | 10/31/2017 | 10/31/2019 | 10/31/2017 | 12/31/2016 | 08/31/2017 | 11/30/2017 | 05/31/2017 | 10/31/2017 | 11/30/2017 |
| 01/31/2017 | 01/31/2017 | 06/30/2017 | 04/30/2019 | 06/30/2017 | 04/30/2017 | 12/31/2016 | 01/31/2017 | 05/31/2017 | 06/30/2017 | 04/30/2017 |
| 05/31/2017 | 01/31/2017 | 07/31/2017 | 04/30/2019 | 07/31/2017 | 09/30/2017 | 12/31/2016 | 01/31/2017 | 05/31/2017 | 08/31/2017 | 05/31/2017 |
| 01/31/2017 | 01/31/2017 | 05/31/2017 | 04/30/2019 | 05/31/2017 | 10/31/2017 | 08/31/2017 | 01/31/2017 | 05/31/2017 | 05/31/2017 | 01/31/2017 |
| 05/31/2017 | 01/31/2017 | 01/31/2017 | 04/30/2019 | 01/31/2017 | 05/31/2017 | 12/31/2016 | 05/31/2017 | 05/31/2017 | 01/31/2017 | 05/31/2017 |
| 05/31/2017 | 01/31/2017 | 01/31/2017 | 04/30/2019 | 01/31/2017 | 01/31/2017 | 12/31/2016 | 01/31/2017 | 05/31/2017 | 01/31/2017 | 05/31/2017 |
| 05/31/2017 | 01/31/2017 | 08/31/2017 | 10/23/2020 | 08/31/2017 | 06/30/2017 | 08/31/2017 | 05/31/2017 | 05/31/2017 | 08/31/2017 | 05/31/2017 |
| 05/31/2017 | 01/31/2017 | 02/28/2017 | 04/30/2017 | 02/28/2017 | 09/30/2017 | 02/28/2017 | 05/31/2017 | 05/31/2017 | 02/28/2017 | 05/31/2017 |
| 01/31/2017 | 01/31/2017 | 12/31/2016 | 04/30/2019 | 12/31/2016 | 03/31/2017 | 02/28/2017 | 01/31/2017 | 05/31/2017 | 12/31/2016 | 02/28/2017 |
| 06/30/2017 | 05/31/2017 | 09/30/2017 | 10/31/2017 | 09/30/2017 | 01/31/2017 | 08/31/2017 | | | 09/30/2017 | |
| 01/31/2017 | 01/31/2017 | 10/31/2017 | 10/31/2019 | 10/31/2017 | 04/30/2017 | 10/31/2017 | 01/31/2017 | 05/31/2017 | 10/31/2017 | 01/31/2018 |
| 06/30/2017 | 04/30/2017 | 08/31/2017 | 10/31/2019 | 08/31/2017 | 09/30/2017 | 07/31/2017 | | | 08/31/2017 | |
| 01/31/2017 | 01/31/2017 | 10/31/2017 | 10/31/2019 | 10/31/2017 | 07/31/2017 | 10/31/2017 | 01/31/2017 | 05/31/2017 | 10/31/2017 | 01/31/2018 |
| | | | 04/30/2019 | 04/30/2019 | 09/29/2017 | 02/28/2017 | 08/31/2019 | 02/31/2015 | 02/28/2019 | |
| | 01/31/2017 | 12/31/2016 | 01/31/2017 | 12/31/2016 | 10/31/2017 | 08/31/2017 | 04/30/2017 | | 12/31/2016 | 04/30/2018 |
| 05/31/2016 | 05/31/2017 | 02/28/2017 | 11/30/2017 | 02/28/2017 | 12/31/2016 | 05/31/2017 | 01/31/2017 | | 02/28/2017 | 12/31/2017 |
| 01/31/2017 | 01/31/2017 | 05/31/2017 | 05/31/2017 | 05/31/2017 | 03/31/2017 | 04/30/2017 | 01/31/2017 | | 05/31/2017 | 11/30/2015 |
| | 01/31/2017 | 10/31/2017 | 04/30/2019 | 10/31/2017 | 02/28/2017 | 06/30/2017 | 08/31/2017 | 10/23/2016 | 10/31/2016 | 02/28/2017 |
| | 01/31/2017 | 05/31/2017 | 04/30/2019 | 05/31/2017 | 06/30/2017 | 08/31/2017 | 03/31/2017 | 10/31/2017 | 05/31/2017 | 03/31/2018 |
| 06/30/2017 | 01/31/2017 | 02/28/2017 | 04/30/2019 | 02/28/2017 | 12/31/2016 | 12/31/2016 | 01/31/2017 | 05/31/2017 | 02/28/2017 | 05/31/2017 |
| 04/30/2017 | 05/31/2017 | 06/30/2017 | | 06/30/2017 | REVOKED | 06/30/2017 | | 11/30/2017 | 06/30/2017 | |
| 05/31/2017 | 01/31/2017 | 09/30/2017 | 10/23/2020 | 09/30/2017 | 12/31/2016 | 08/31/2017 | 05/31/2017 | 05/31/2017 | 09/30/2017 | 05/31/2017 |
| 09/30/2016 | 01/31/2017 | 09/30/2017 | 04/30/2019 | 09/30/2017 | 07/31/2017 | 04/30/2017 | 01/31/2017 | 05/31/2017 | 09/30/2017 | 10/31/2016 |

WATER SURVIVAL

| |
|---------|
| 31/2019 |
| 28/2019 |
| 31/2018 |
| 31/2019 |
| 30/2018 |
| 31/2018 |
| 31/2018 |
| 31/2018 |
| 30/2018 |
| 30/2018 |
| 30/2019 |
| 31/2020 |
| 30/2018 |
| 28/2017 |
| 30/2017 |
| 31/2018 |
| 31/2018 |
| 31/2019 |
| 30/2019 |
| 28/2018 |
| 30/2020 |
| 31/2019 |
| 30/2020 |
| 31/2019 |
| 30/2018 |
| 30/2017 |
| 30/2018 |
| 31/2020 |
| 31/2016 |
| 31/2018 |
| 31/2018 |
| 30/2020 |
| 31/2019 |
| 31/2020 |

ent Proficiency for VMM-265 - As Of: 12/13/2016 Proficiency Date

ays Until Expired: >= 90 days 60-89 Days 30-59 Days < 30 Days Expired

Asterisk (*) indicates augmenting or temporarily assigned to another unit. No readiness contribution.

| | Familiarization (FAM(2)) | | | | | Confined Area Landings (CAL(2)) | | | | | |
|---|--------------------------|------------|------------|------------|------------|---------------------------------|------------|-----------|------------|------------|-----------|
| | 2010 | 2011 | 2020 | 2030 | 2031 | 2110 | 2130 | 2131 | 2132 | 2133 | 2134 |
| (b)(6) (b)(3) 10 U.S. Code § 130b | 8/28/2012 | 8/28/2012 | 8/28/2012 | 11/9/2016 | 12/8/2016 | 8/28/2012 | 11/29/2016 | 6/7/2016 | 12/8/2016 | 11/4/2016 | 12/2/2016 |
| | 3/16/2015 | 3/16/2015 | 3/19/2015 | 9/21/2016 | 11/23/2016 | 3/16/2015 | 11/29/2016 | 9/20/2016 | 12/2/2016 | 11/17/2016 | 12/2/2016 |
| | 10/17/2016 | 10/17/2016 | 12/12/2016 | 10/18/2016 | 12/12/2016 | 11/4/2016 | 11/4/2016 | 11/7/2016 | 12/12/2016 | | 12/6/2016 |

| AT I | DCMI | NSI | WTI | ANI | CRM F | CRM I | INST |
|-------|----------|----------|----------|------------|------------|------------|------------|
| 15/12 | 10/04/13 | 06/15/12 | 06/15/12 | 01/21/17 | 05/08/2021 | | 05/20/2020 |
| 25/16 | | | | | | | 06/12/2021 |
| 03/12 | | 06/10/13 | 10/25/15 | 02/28/17 | 06/03/2018 | | 04/27/2021 |
| | | | | | 03/02/2021 | 03/02/2021 | |
| P | | | | | | | |
| P | | | | | | | |
| 05/15 | | 08/05/16 | | | 06/13/2021 | 06/14/2021 | 06/12/2021 |
| 21/15 | | 01/29/16 | 10/23/16 | | 06/08/2021 | 06/14/2021 | |
| P | | | | | | | |
| 27/16 | | 08/05/16 | | | | | |
| 21/15 | | 07/20/15 | 10/31/05 | | 08/26/2017 | | |
| 20/14 | | | 10/29/10 | 02/15/2017 | | | |
| | | | | 06/01/2011 | | | |
| 11/13 | | 01/30/14 | | | | | |
| 18/12 | | 06/08/12 | 10/28/12 | 01/14/2017 | 10/01/2018 | | 08/04/2019 |
| 18/13 | | | | REVOKED | 08/13/2017 | | |

| CREW | NATOPS | INST Q |
|-----------------------------------|------------|------------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | 07/31/2017 | 07/31/2017 |
| | 06/30/2017 | 01/31/2017 |
| | 05/31/2017 | 08/30/2017 |
| | 04/31/2017 | 11/30/2017 |
| | 11/30/2017 | 04/30/2017 |
| | 05/31/2017 | 06/30/2017 |
| | 01/31/2017 | 01/31/2017 |
| | 06/30/2017 | 05/31/2017 |
| | 12/31/2016 | 05/31/2017 |
| | 05/31/2017 | 06/30/2017 |
| | 09/30/2017 | 12/31/2016 |
| | 10/31/2017 | 08/31/2017 |
| | 06/30/2017 | 12/31/2016 |
| | 07/31/2017 | 12/31/2016 |
| | 05/31/2017 | 08/31/2017 |
| | 11/30/2017 | 12/31/2016 |
| | 04/31/2017 | 12/31/2016 |
| | 08/31/2017 | 08/31/2017 |
| | 02/28/2017 | 02/28/2017 |
| | 01/31/2017 | 01/31/2017 |
| | 09/30/2017 | 08/31/2017 |
| | 10/31/2017 | 10/31/2017 |
| | 08/31/2017 | 07/31/2017 |
| | 10/31/2017 | 10/31/2017 |
| | --- | --- |
| | 06/30/2017 | 08/31/2017 |
| | 02/28/2017 | 05/31/2017 |
| | 05/31/2017 | 04/30/2017 |
| | 09/30/2017 | 03/31/2015 |
| | 05/31/2017 | 08/31/2017 |
| | 01/31/2017 | 12/31/2016 |
| | 06/30/2017 | 06/30/2017 |
| | 09/30/2017 | 08/31/2017 |
| | 09/30/2017 | 04/30/2017 |

| T Q | NSQ(HLL) | NSQ | CQ |
|------|------------|------------|------------|
| 2017 | 10/26/2017 | 06/23/2017 | --- |
| 2017 | 10/26/2017 | 06/23/2017 | 07/13/2017 |
| 2017 | 11/04/2017 | 07/02/2017 | 08/16/2017 |
| 2017 | 11/17/2017 | 07/15/2017 | 10/31/2017 |
| 2017 | 11/15/2017 | 06/23/2017 | 09/15/2017 |
| 2017 | 10/09/2017 | 03/22/2017 | 05/03/2017 |
| 2017 | 11/04/2017 | 07/02/2017 | 04/20/2017 |
| 2017 | 11/04/2017 | 07/02/2017 | 07/14/2017 |
| 2017 | 11/17/2017 | 07/15/2017 | 04/19/2017 |
| 2017 | 09/13/2017 | 02/25/2017 | 09/13/2017 |
| 2017 | 10/27/2017 | 06/24/2017 | 09/19/2017 |
| 2017 | 11/17/2017 | 07/15/2017 | 10/28/2017 |
| 2017 | 10/18/2017 | 06/15/2017 | 05/24/2017 |
| 2017 | 07/25/2017 | 03/22/2017 | 03/21/2017 |
| 2017 | 11/15/2017 | 07/02/2017 | 09/01/2017 |
| 2017 | 11/17/2017 | 07/15/2017 | 03/21/2017 |
| 2017 | 10/27/2017 | 06/24/2017 | --- |
| 2017 | 10/26/2017 | --- | --- |
| 2017 | --- | --- | --- |
| 2017 | 10/13/2017 | 04/29/2017 | 08/16/2017 |
| -- | --- | --- | --- |
| 2017 | 10/26/2017 | --- | --- |
| -- | --- | --- | --- |
| 2017 | 11/17/2017 | --- | --- |
| -- | --- | --- | --- |
| 2017 | 06/22/2017 | 12/23/2016 | 06/08/2017 |
| 2016 | 03/24/2017 | 10/28/2016 | 07/14/2016 |
| 2017 | 07/07/2017 | 03/04/2017 | --- |
| 2016 | 09/01/2016 | 04/29/2016 | 07/19/2017 |
| 2017 | 02/17/2017 | 01/09/2016 | 09/16/2017 |
| 2017 | 10/20/2017 | 06/17/2017 | 09/15/2017 |
| 2014 | 04/24/2014 | 01/11/2013 | 04/30/2014 |
| 2017 | 11/17/2017 | --- | --- |
| 2017 | 06/20/2017 | 12/01/2016 | 03/21/2017 |

[illegible]

| CREW | OP | BIP | TAC | SL | DL | FL | AMC | FCP | FLSE | AAR I | TSI | LAT I | LAT STAN | CM I | NSI | WTI | ANI | CRM F | CRM I | INST CHECKER |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|
| | 04/13/16 | 04/13/16 | | | | | 06/10/10 | P | | C | | | | | | | | | | |
| | 05/15/12 | 05/22/15 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 06/15/12 | 01/21/17 | 05/08/21 | | 05/20/20 |
| | 10/30/13 | 05/15/15 | 05/14/15 | 11/09/15 | | | | 09/24/15 | | | | 07/25/16 | | | | | | | | 05/12/21 |
| | 01/28/10 | 09/10/13 | 08/12/13 | 06/12/13 | 04/15/13 | 12/11/15 | 02/24/16 | 06/08/12 | P | 03/19/13 | 02/08/14 | 11/03/12 | 10/26/15 | | 06/10/13 | 10/25/15 | 02/28/17 | 06/03/18 | | 04/27/21 |
| | 10/20/15 | C | 10/20/15 | C | | | | 10/10/15 | | | | | | | | | C | C | | |
| | 08/12/15 | | | | | | | | | | | | | | | | | | | |
| | 07/22/14 | 05/28/16 | 05/28/16 | | | | | P | | | | | | | | | | | | |
| | 04/14/15 | | | | | | | | | | | | | | | | | | | |
| | 07/17/14 | 07/19/16 | 07/19/16 | | | | | 09/19/16 | | | | | | | | | | | | |
| | 06/03/14 | 02/06/16 | 02/05/16 | 09/20/16 | | | | 06/10/16 | | | | | | | | | | | | |
| | 09/27/14 | 06/16/16 | 06/16/16 | | | | | 09/19/16 | | | | | | | | | | | | |
| | 12/13/11 | 10/13/13 | 11/29/13 | 07/14/16 | | | | 12/10/13 | | | | | | | | | | | | |
| | 08/06/12 | 06/11/15 | 10/31/14 | 03/12/15 | 06/08/16 | | | 07/23/15 | | C | | 05/05/15 | | | 08/05/16 | | | 06/13/21 | 06/14/21 | 08/12/21 |
| | 07/14/13 | 10/01/14 | 10/01/14 | 04/17/15 | 11/03/15 | 07/20/16 | | 12/04/14 | | | | 07/21/15 | | | 01/29/16 | C | | 06/08/21 | 06/14/21 | |
| | 01/16/13 | 07/22/15 | 07/22/15 | C | | | | 01/08/16 | P | | | P | | | | | | | | |
| | 11/04/13 | 09/16/15 | 09/16/15 | 03/24/16 | 08/23/16 | P | | 11/25/15 | | C | | 05/27/16 | | | 08/05/16 | | | | | |
| | 01/20/15 | | | | | | | | | | | | | | | | | | | |
| | 01/20/15 | P | P | | | | | | | | | | | | | | | | | |
| | 08/11/15 | | | | | | | | | | | | | | | | | | | |
| | 02/15/14 | 05/10/16 | 05/10/16 | | | | | 08/24/16 | | | | | | | | | | | | |
| | 09/20/16 | | | | | | | | | | | | | | | | | | | |
| | 10/30/15 | | | | | | | | | | | | | | | | | | | |
| | 08/31/16 | | | | | | | | | | | | | | | | | | | |
| | 10/29/16 | | | | | | | | | | | | | | | | | | | |
| | 02/12/15 | | | | | | | | | | | | | | | | | | | |
| | 09/01/15 | 12/06/14 | 04/22/15 | 02/19/15 | 05/01/15 | | 12/06/14 | | | | | 05/21/15 | | | 07/20/15 | 10/31/15 | | 09/26/17 | | |
| | 09/17/12 | 01/04/13 | 02/18/13 | 05/21/13 | 05/20/14 | | 07/28/14 | 07/24/13 | | | | 03/20/14 | | | 10/29/10 | 02/15/17 | | | | |
| | 05/01/15 | 05/04/10 | 05/04/10 | 01/20/12 | 05/21/12 | 07/15/15 | | 05/13/10 | | 04/12/12 | | 10/11/13 | | | 01/30/14 | | | | | |
| | 10/20/15 | 10/20/15 | 10/20/15 | | | | | | | | | | | | | | | | | |
| | 02/05/10 | 03/18/14 | 05/18/13 | 12/17/13 | 05/01/12 | 10/15/12 | 10/18/13 | 08/11/11 | 10/10/13 | 08/28/12 | 03/13/14 | 01/18/12 | 09/29/12 | | 06/06/12 | 10/28/12 | 01/14/17 | 10/01/18 | | 08/04/19 |
| | 09/01/10 | | | | | | | | | | | | | | | | | | | |
| | 12/14/10 | 12/12/12 | 12/31/11 | 10/31/12 | 11/18/14 | | | 01/11/12 | | 08/21/12 | | 07/28/13 | | | | | | 08/13/17 | | |

| NATOPS Q | INST Q | LAT Q | NSQ(HLL) | CQ |
|----------|----------|----------|----------|-------------------|
| 07/31/17 | 07/31/17 | 08/07/17 | 10/26/17 | |
| 08/30/17 | 01/31/17 | 08/03/17 | 10/26/17 | 09/23/17 07/19/17 |
| 09/31/17 | 09/30/17 | 08/03/17 | 10/26/17 | 06/23/17 08/16/17 |
| 01/31/17 | 11/30/16 | 08/07/17 | 10/27/17 | 06/14/17 10/31/17 |
| 11/30/16 | 04/10/17 | 07/13/17 | 10/24/17 | 06/23/17 09/19/17 |
| 09/30/17 | 08/31/17 | 07/22/17 | C | |
| 05/31/17 | 06/30/17 | 07/13/17 | 10/19/17 | 03/22/17 05/09/17 |
| 01/31/17 | 01/31/17 | 09/01/17 | 10/27/17 | C 04/20/17 |
| 06/30/17 | 05/31/17 | 08/04/17 | 10/27/17 | 06/24/17 02/14/17 |
| 12/31/16 | 05/31/17 | 07/31/17 | 10/17/17 | 05/18/17 04/19/17 |
| 05/31/17 | 06/30/17 | 07/22/17 | 09/13/17 | 02/10/17 09/13/17 |
| 09/30/17 | 12/31/16 | 10/17/17 | 10/27/17 | 09/24/17 09/19/17 |
| 10/31/17 | 08/31/17 | 10/13/17 | 10/26/17 | 09/27/17 10/28/17 |
| 06/30/17 | 12/31/16 | 10/14/17 | 10/18/17 | 06/15/17 05/24/17 |
| 07/31/17 | 12/31/16 | 07/27/17 | 07/28/17 | 03/22/17 03/21/17 |
| 05/31/17 | 08/31/17 | 10/17/17 | 10/27/17 | 06/24/17 09/01/17 |
| 01/31/17 | 12/31/16 | 08/03/17 | 10/17/17 | 02/12/17 03/21/17 |
| 01/31/17 | 12/31/16 | 08/04/17 | 10/27/17 | 06/24/17 |
| 08/31/17 | 08/31/17 | 09/01/17 | 10/26/17 | |
| 01/31/17 | 01/31/17 | 10/13/17 | 10/13/17 | 04/10/17 08/10/17 |
| 09/30/17 | 08/31/17 | | | |
| 10/31/17 | 10/31/17 | 10/13/17 | C | |
| 08/31/17 | 07/31/17 | | | |
| 10/31/17 | 10/31/17 | 10/13/17 | C | |
| 02/28/17 | 03/28/17 | 10/17/17 | | |
| 06/30/17 | 08/31/17 | 09/29/17 | 06/22/17 | 12/23/16 08/08/17 |
| 02/28/17 | 05/31/17 | 12/08/16 | 03/24/17 | 10/18/16 02/12/17 |
| 09/30/17 | 07/31/17 | 10/17/17 | 10/17/17 | 01/09/17 07/19/17 |
| 03/31/17 | 08/31/17 | 02/17/17 | 02/17/17 | 10/10/17 09/16/17 |
| 01/31/17 | 12/31/16 | 10/10/17 | 10/20/17 | 08/17/17 09/15/17 |
| 06/30/17 | 06/30/17 | 07/28/17 | 08/24/17 | 10/10/17 08/30/17 |
| 09/30/17 | 04/30/17 | 07/12/17 | 06/20/17 | 12/01/16 03/21/17 |

| AEROMEDICAL | CRM CLASS | CRM FLIGHT | CAS RULES | EMERGENCY EGRESS | FLIGHT PHYSICAL | INST CHECK | LASER SAFETY | NATOPS AUDIT | NATOPS CHECK | NVD LAB | WATER SURVIVAL |
|-------------|-----------|------------|-----------|------------------|-----------------|------------|--------------|--------------|--------------|---------|----------------|
| 631117 | 731117 | 731117 | 101420 | 731117 | 731117 | 830117 | C | 831117 | 731117 | 103107 | 131116 |
| 631117 | 731117 | 228117 | 430119 | 228117 | 731117 | 131117 | 531117 | 531117 | 228117 | 531117 | 228119 |
| 531117 | 731117 | 531117 | 430119 | 531117 | 531117 | 830117 | 531117 | 531117 | 531117 | 531117 | 731116 |
| 131117 | 731117 | 228117 | 430119 | 228117 | 100117 | 110016 | 131117 | 531117 | 228117 | 630117 | 131116 |
| 730117 | 731117 | 110016 | 430119 | 110016 | 531117 | 430117 | 530117 | 162117 | 113016 | 531117 | 430116 |
| 430117 | 531117 | 731117 | - | 830117 | 121117 | 531117 | - | - | 730117 | - | 430116 |
| 531117 | 131117 | 930117 | 102325 | 530117 | 123116 | 831117 | 530117 | 530117 | 531117 | 531117 | 731116 |
| 531117 | 131117 | 531117 | 430119 | 531117 | 110016 | 830117 | 531117 | 531117 | 531117 | 531117 | 731116 |
| 830117 | 731117 | 121117 | 831118 | 731117 | 103117 | 531117 | 121117 | 531117 | 121117 | 531117 | 123116 |
| 930117 | 731117 | 830117 | 430119 | 830117 | 110016 | 531117 | 131117 | 531117 | 830117 | 831116 | 831116 |
| 531117 | 731117 | 123116 | 430119 | 123116 | 930117 | 531117 | 131117 | 531117 | 123116 | 531117 | 830116 |
| 831117 | 731117 | 531117 | 430119 | 531117 | 123116 | 630117 | 831117 | 531117 | 531117 | 531117 | 830116 |
| 103117 | 131117 | 930117 | 921119 | 930117 | 830117 | 123116 | 131117 | 830117 | 930117 | 103116 | 930116 |
| C | 131117 | C | 103119 | C | 123116 | 831117 | 131117 | 531117 | C | 103117 | 531116 |
| 131117 | 131117 | 830117 | 430119 | 830117 | 123116 | 131117 | 531117 | 830117 | 430117 | 110016 | 110016 |
| 531117 | 731117 | 731117 | 430119 | 731117 | 930117 | 123116 | 131117 | 531117 | 531117 | 531117 | 228117 |
| 103117 | 731117 | 531117 | 430119 | 531117 | 103117 | 831117 | 131117 | 831117 | 103117 | 131117 | 110017 |
| 531117 | 731117 | 131117 | 430119 | 531117 | 123116 | 831117 | 131117 | 531117 | 131117 | 531117 | 103116 |
| 831117 | 731117 | 131117 | 430119 | 121117 | 121117 | 123116 | 131117 | 531117 | 131117 | 531117 | 103116 |
| 531117 | 131117 | 831117 | 102325 | 831117 | 930117 | 531117 | 531117 | 831117 | 831117 | 531117 | 731116 |
| 131117 | 731117 | 123116 | 430119 | 123116 | 301117 | 228117 | 103117 | 531117 | 123116 | 228117 | 228116 |
| 830117 | 531117 | 930117 | C | 930117 | 731117 | 831117 | - | - | 930117 | - | 830116 |
| 131117 | 131117 | 103119 | 103119 | 103117 | 103117 | 131117 | 531117 | 103117 | 103117 | 103116 | 831116 |
| 830117 | 430117 | 831117 | 103119 | 831117 | 930117 | 731117 | - | - | 831117 | - | 830116 |
| 103117 | 731117 | 103117 | 103119 | 103117 | 731117 | 103117 | 131117 | 103117 | 103116 | 103116 | 831116 |
| 093117 | 731117 | 103117 | 103119 | 103117 | 731117 | 103117 | 131117 | 103117 | 103116 | 103116 | 831116 |
| 093117 | 731117 | 103117 | 103119 | 103117 | 731117 | 103117 | 131117 | 103117 | 103116 | 103116 | 831116 |
| - | - | - | 731119 | 731119 | 830117 | 731117 | 731117 | 731117 | 731117 | - | 430116 |
| - | 131117 | 123116 | 731119 | 123116 | 831117 | 831117 | - | 123116 | 430119 | 930117 | 930117 |
| 731117 | 731117 | 228117 | C | 228117 | 120116 | 531117 | 123116 | - | 228117 | 103116 | 430116 |
| - | 131117 | 123116 | 430119 | 103119 | 830117 | 731117 | 731117 | 731117 | 731117 | 228117 | 731116 |
| - | 131117 | 531117 | 430119 | 531117 | 830117 | 830117 | 531117 | 103117 | 531117 | 301116 | 531116 |
| 830117 | 131117 | 228117 | 430119 | 228117 | 123116 | 123116 | 103117 | 531117 | 228117 | 831117 | 531116 |
| 731116 | 731117 | 930117 | 430119 | 930117 | 731117 | 430117 | 103117 | 530117 | 103116 | 103116 | 531116 |

(b)(6) (b)(3) 10 U.S. Code § 130b

Moon: Full Moon

Location:

10 (b) (3) Stat
455

Latitude/Longitude:

455 (b) (3) Stat
U.S. 10 Code

Start DTG

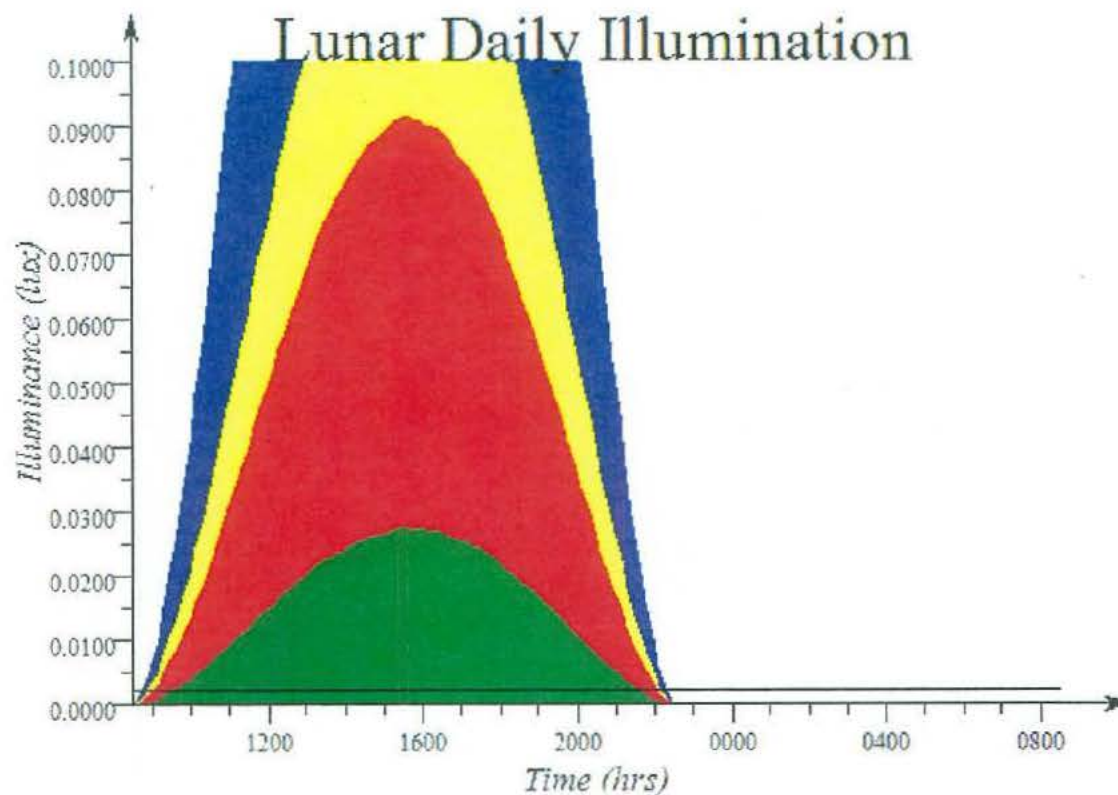
845 , 13 Dec 2016

Time Offset:

No offset

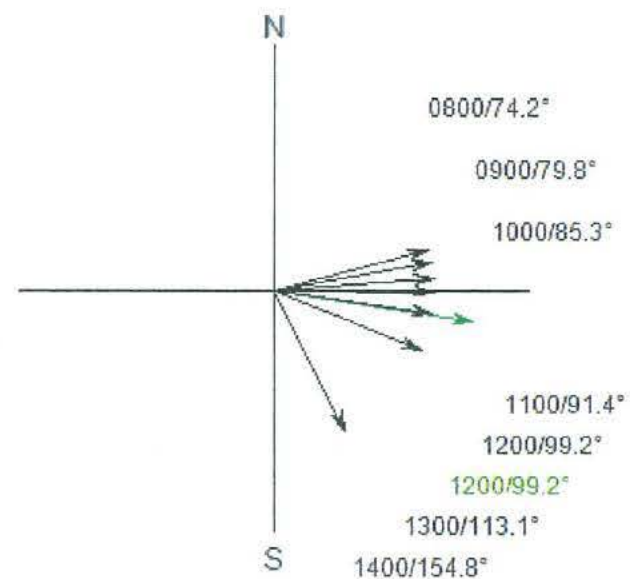
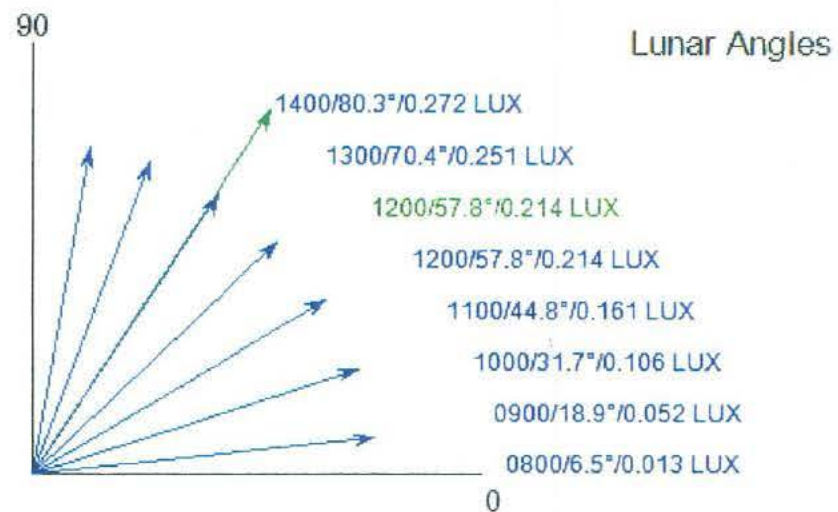
Percent Illumination:

99%



— Lunar Threshold: 0.0022

■ Clear to Sct ■ Partly Cloudy ■ Mostly Cloudy ■ Dark Overcast



(b)(3) Statute 455 10
U.S. Code

| | | | | |
|----------------|------|-----|----|-------|
| Moonrise: 0810 | Time | ALT | AZ | LUX |
| Sunset: 0837 | 1200 | 57 | 99 | 0.214 |
| EENT: 0932 | 800 | 6 | 74 | 0.013 |
| BMNT: 2114 | 900 | 18 | 79 | 0.052 |
| Moonset: 2156 | 1000 | 31 | 85 | 0.106 |
| Sunrise: 2208 | 1100 | 44 | 91 | 0.161 |
| | 1200 | 57 | 99 | 0.214 |

- Rising Moon
- Falling Moon
- Time on Target

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|--------|---------------------|---------------|--------|----------------|---|--------------|----------|------------|--|---|-------|--------|------------|---------|-------|----|---|-----------|------|-------|----|-------|------------|------|-------|-------|---|----------|-----|-------|------|---|--------------|----------|-------|----|---|--------------|----------|-------|----|---|-----------|--------|-------|----|---|-------------|--------|-------|----|---|------------|--------|-------|-----|---|---------|---------|-------|----|----|---------|---------|-------|----|----|-------------|------------|-------|----|----|------------|--------|-------|----|----|------------|--------|------|----|----|-----------|--------|-----|----|--|---------------|-------------|--------|----|--|------------------|-----------|-------|----|--|------------------|------|-------|----|--|
| MISSION: NS SEC LLL LAT/TAAR/CALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| JULIAN DATE: 16348 | | | CAL DATE: 13-Dec-16 | | | TIME PER(S): 1 | | | MODES: 3 | | | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EVENT | | 1 | 2 | S | H | A/C | CREWS | | | | CALL SIGNS | | | COMMS | TCN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1105 | | | | | | 04 | U.S. Code \$ 130b (b)(6) (b)(3) 10 | | | | (b)(6) (b)(3) 10 U.S. Code \$ 130b | | | ! # \$ | 05Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1106 | | | | | | 06 | | | | | | | | @ ^ % | 68Y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| COMM KEY ATC @ WX # CTA \$ NTA % BASE ^ CTA# | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B/U | | GOLD | | CHATTERMARK | | | | USEABLE LOAD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | | 21 | | 21 / 11A / 24 | | | | 5% | | 14.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NOTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| YORON AIRPORT / RORY: 118.3 ERABU AIRPORT / RJKB: 118.050 TOKUNO AIRPORT / RJKN: 122.7 SYS TOT (N ARIP): 10:55:00 1039 SYS TOT (S ARIP): 10:57:30 1127 ARCT- 1000Z 1030 1127 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>BASE</td> <td>BASE</td> <td>290.7</td> <td>PT</td> <td>1</td> </tr> <tr> <td>ROTM ATIS</td> <td>ATIS</td> <td>230.0</td> <td>PT</td> <td>2</td> </tr> <tr> <td>ROTM GRND</td> <td>GRND</td> <td>360.2</td> <td>PT</td> <td>3</td> </tr> <tr> <td>ROTM TWR</td> <td>TWR</td> <td>340.2</td> <td>PT</td> <td>4</td> </tr> <tr> <td>NAHA APP (S)</td> <td>NAHA APP</td> <td>258.3</td> <td>PT</td> <td>5</td> </tr> <tr> <td>NAHA APP (N)</td> <td>NAHA APP</td> <td>335.8</td> <td>PT</td> <td>6</td> </tr> <tr> <td>RODN ATIS</td> <td>KADENA</td> <td>280.5</td> <td>PT</td> <td>7</td> </tr> <tr> <td>RODN GROUND</td> <td>KADENA</td> <td>275.8</td> <td>PT</td> <td>8</td> </tr> <tr> <td>RODN TOWER</td> <td>KADENA</td> <td>315.8</td> <td>PT</td> <td>9</td> </tr> <tr> <td>CTA CMN</td> <td>CTA CMN</td> <td>336.2</td> <td>PT</td> <td>10</td> </tr> <tr> <td>NTA CMN</td> <td>NTA CMN</td> <td>345.8</td> <td>PT</td> <td>11</td> </tr> <tr> <td>W178 COMMON</td> <td>W178 RANGE</td> <td>287.3</td> <td>PT</td> <td>14</td> </tr> <tr> <td>SQD COMMON</td> <td>DRAGON</td> <td>312.2</td> <td>PT</td> <td>21</td> </tr> <tr> <td>SQD COMMON</td> <td>DRAGON</td> <td>45.9</td> <td>PT</td> <td>24</td> </tr> <tr> <td>HAVEQUICK</td> <td>DRAGON</td> <td>11A</td> <td>PT</td> <td></td> </tr> <tr> <td>AMAMI AIRPORT</td> <td>AMAMI RADIO</td> <td>118.15</td> <td>PT</td> <td></td> </tr> <tr> <td>KADENA AERO CLUB</td> <td>AERO CLUB</td> <td>119.7</td> <td>PT</td> <td></td> </tr> <tr> <td>FLIGHT FOLLOWING</td> <td>NAHA</td> <td>132.3</td> <td>PT</td> <td></td> </tr> </table> | | | | | | | | | | | | | | | BASE | BASE | 290.7 | PT | 1 | ROTM ATIS | ATIS | 230.0 | PT | 2 | ROTM GRND | GRND | 360.2 | PT | 3 | ROTM TWR | TWR | 340.2 | PT | 4 | NAHA APP (S) | NAHA APP | 258.3 | PT | 5 | NAHA APP (N) | NAHA APP | 335.8 | PT | 6 | RODN ATIS | KADENA | 280.5 | PT | 7 | RODN GROUND | KADENA | 275.8 | PT | 8 | RODN TOWER | KADENA | 315.8 | PT | 9 | CTA CMN | CTA CMN | 336.2 | PT | 10 | NTA CMN | NTA CMN | 345.8 | PT | 11 | W178 COMMON | W178 RANGE | 287.3 | PT | 14 | SQD COMMON | DRAGON | 312.2 | PT | 21 | SQD COMMON | DRAGON | 45.9 | PT | 24 | HAVEQUICK | DRAGON | 11A | PT | | AMAMI AIRPORT | AMAMI RADIO | 118.15 | PT | | KADENA AERO CLUB | AERO CLUB | 119.7 | PT | | FLIGHT FOLLOWING | NAHA | 132.3 | PT | |
| BASE | BASE | 290.7 | PT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROTM ATIS | ATIS | 230.0 | PT | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROTM GRND | GRND | 360.2 | PT | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROTM TWR | TWR | 340.2 | PT | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAHA APP (S) | NAHA APP | 258.3 | PT | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAHA APP (N) | NAHA APP | 335.8 | PT | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RODN ATIS | KADENA | 280.5 | PT | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RODN GROUND | KADENA | 275.8 | PT | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RODN TOWER | KADENA | 315.8 | PT | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CTA CMN | CTA CMN | 336.2 | PT | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NTA CMN | NTA CMN | 345.8 | PT | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W178 COMMON | W178 RANGE | 287.3 | PT | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SQD COMMON | DRAGON | 312.2 | PT | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SQD COMMON | DRAGON | 45.9 | PT | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HAVEQUICK | DRAGON | 11A | PT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AMAMI AIRPORT | AMAMI RADIO | 118.15 | PT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KADENA AERO CLUB | AERO CLUB | 119.7 | PT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FLIGHT FOLLOWING | NAHA | 132.3 | PT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>NAME</td> <td colspan="4">FILL TO</td> <td colspan="4">MSN</td> <td colspan="4">JOKER</td> <td colspan="4">BINGO</td> </tr> <tr> <td></td> <td colspan="4">11.5</td> <td colspan="4">13.3</td> <td colspan="4">4.1</td> <td colspan="4">2.3</td> </tr> <tr> <td></td> <td colspan="4"></td> <td colspan="4"></td> <td colspan="4">3.4</td> <td colspan="4">1.6</td> </tr> </table> | | | | | | | | | | | | | | | NAME | FILL TO | | | | MSN | | | | JOKER | | | | BINGO | | | | | 11.5 | | | | 13.3 | | | | 4.1 | | | | 2.3 | | | | | | | | | | | | | 3.4 | | | | 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME | FILL TO | | | | MSN | | | | JOKER | | | | BINGO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11.5 | | | | 13.3 | | | | 4.1 | | | | 2.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 3.4 | | | | 1.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="10">EVILSGTMAJ</td> <td colspan="5">MONKEYSPIT</td> </tr> <tr> <td colspan="15" style="text-align: center;">SPINS</td> </tr> <tr> <td colspan="5">WORD</td> <td colspan="5">LETTER</td> <td colspan="5">NUMBER</td> </tr> <tr> <td colspan="5">APPLE</td> <td colspan="5">G</td> <td colspan="5">5</td> </tr> </table> | | | | | | | | | | | | | | | EVILSGTMAJ | | | | | | | | | | MONKEYSPIT | | | | | SPINS | | | | | | | | | | | | | | | WORD | | | | | LETTER | | | | | NUMBER | | | | | APPLE | | | | | G | | | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EVILSGTMAJ | | | | | | | | | | MONKEYSPIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPINS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WORD | | | | | LETTER | | | | | NUMBER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPLE | | | | | G | | | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AN / ALE-47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| TIMELINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HOT SEAT | | | | 1710I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HOT FUEL | | | | 0820 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIO | | | | 0830 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RIO | | C1 | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C2 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SG | 1A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | HQ | 11A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | SAT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TAXI | | | | 0840 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TAKEOFF | | | | 0845 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BEGIN LAT | | | | 0928 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| END LAT | | | | 1003 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CALS | | | | 1040 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HOT SEAT | | | | 1100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARIP | | | | 1127 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RTB | | | | 1245 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LAND | | | | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAVAIDS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NFO | | | | 42X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| KAD | | | | ' 57X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TIT | | | | 89X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ONC | | | | 78X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| JKN | | | | 38X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NHC | | | | 112X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENVIRONMENTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SR / SS | | | | 0708 / 1739 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MR / MS | | | | 1711 / 0550 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EENT / ILL | | | | 1833 / 96% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LLL | | | | NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HLL | | | | 1833 / 0614 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

(Z): 08:49:23
LOG TIME (Z): 13:02:59
ETE: 04+13+36

DTG: 13-Dec-2016 05:35:39
TOTAL DIST: 576.4

TOT FUEL ONBOARD: 11000
FUEL REQUIRED: 12901
LDG FUEL ONBOARD: 3301

ESA: 3300

PLANNED FOR 220 NO
WIND

MSN BINDER:

| HDG | ALT | SPD | DIST | TIME | FUEL | REMARKS |
|-----|------|--------------|-------|----------------------|--------------|----------------|
| MH | MSL | CAS | LEG | ETE | CONT LEG | LOAD ONLOAD |
| TH | AGL | GS TAS | REM | ETA (Z) ADTOT (Z) | AVAIL | GWT |
| | 747 | | | | | |
| | 500 | | 576.4 | 8:49:23 | 11000 | 47475 |
| 241 | 1336 | 187C | 0.9 | 00+00+18 | 12883 18 | 390 11000 |
| 236 | 1123 | 192G 192T | 575.5 | 8:49:41 | 10982 | 47457 |
| 61 | 2555 | 184C | 2.0 | 00+00+37 | 12846 37 | 630 0 |
| 56 | 2279 | 193G 193T | 573.5 | 8:50:18 | 10946 | 47660 |
| 55 | 7000 | 220C | 37.6 | 00+09+38 | 12334 512 | 630 0 |
| 50 | 7000 | 246G 246T | 535.9 | 8:59:56 | 10434 | 47149 |
| 57 | 7000 | 220C | 36.7 | 00+08+57 | 11878 456 | 630 0 |
| 52 | 7000 | 246G 246T | 499.3 | 9:08:53 | 9978 | 46693 |
| 31 | 7000 | 220C | 31.0 | 00+07+34 | 11494 384 | 630 0 |
| 26 | 7000 | 246G 246T | 468.3 | 9:16:26 | 9594 | 46309 |
| 4 | 7000 | 220C | 17.4 | 00+04+15 | 11279 215 | 630 0 |
| 359 | 7000 | 246G 246T | 450.9 | 9:20:41 | 9379 | 46094 |
| 354 | 7000 | 220C | 20.4 | 00+04+59 | 11027 252 | 630 0 |
| 349 | 7000 | 246G 246T | 430.5 | 9:25:40 | 9127 | 45842 |
| 36 | 1500 | 240C | 14.6 | 00+03+15 | 10872 155 | 630 0 |
| 30 | 1500 | 247G 247T | 415.8 | 9:28:56 | 8971 | 45687 |
| 120 | 1757 | 240C | 8.9 | 00+02+08 | 10749 123 | 630 0 |
| 115 | 500 | 248G 248T | 406.9 | 9:31:04 | 8848 | 45563 |
| 183 | 1780 | 240C | 6.9 | 00+01+40 | 10653 96 | 630 0 |
| 178 | 500 | 248G 248T | 400.0 | 9:32:45 | 8752 | 45467 |
| 108 | 1202 | 240C | 4.2 | 00+01+01 | 10595 58 | 630 0 |
| 102 | 500 | 246G 246T | 395.8 | 9:33:45 | 8694 | 45409 |
| 34 | 1980 | 240C | 5.7 | 00+01+22 | 10517 78 | 630 0 |
| 29 | 500 | 249G 249T | 390.2 | 9:35:07 | 8615 | 45331 |

| DESCRIPTION | LATITUDE | MH | MSL | CAS | LEG | ETE | CONT | LOAD |
|--------------------|-----------|-----|------|------|-------|-----------|-------|--------|
| LEG# / TYPE | LONGITUDE | TH | AGL | GS | REM | ETA (Z) | LEG | ONLOAD |
| FIX / SVAR/FREQ/CH | MGRS | | | TAS | | ADTOT (Z) | AVAIL | GWT |
| (b) (3) | | 53 | 1675 | 240C | 4.6 | 00+01+07 | 10453 | 630 |
| | | | | | | | 64 | 0 |
| | | 48 | 500 | 248G | 385.6 | 9:36:14 | 8552 | 45266 |
| | | | | 248T | | | | |
| | | 47 | 1156 | 240C | 3.3 | 00+00+49 | 10406 | 630 |
| | | | | | | | 47 | 0 |
| | | 42 | 500 | 246G | 382.2 | 9:37:03 | 8505 | 45220 |
| | | | | 246T | | | | |
| | | 14 | 1156 | 240C | 3.5 | 00+00+51 | 10357 | 630 |
| | | | | | | | 49 | 0 |
| | | 8 | 500 | 246G | 378.7 | 9:37:54 | 8456 | 45171 |
| | | | | 246T | | | | |
| | | 5 | 500 | 240C | 6.5 | 00+01+36 | 10265 | 630 |
| | | | | | | | 92 | 0 |
| | | 0 | 500 | 244G | 372.3 | 9:39:29 | 8365 | 45079 |
| | | | | 244T | | | | |
| | | 275 | 500 | 240C | 5.0 | 00+01+14 | 10195 | 630 |
| | | | | | | | 70 | 0 |
| | | 270 | 500 | 244G | 367.3 | 9:40:43 | 8294 | 45010 |
| | | | | 244T | | | | |
| | | 185 | 500 | 240C | 5.9 | 00+01+28 | 10111 | 630 |
| | | | | | | | 84 | 0 |
| | | 180 | 500 | 244G | 361.3 | 9:42:11 | 8210 | 44925 |
| | | | | 244T | | | | |
| | | 209 | 1734 | 240C | 7.3 | 00+01+46 | 10010 | 630 |
| | | | | | | | 101 | 0 |
| | | 203 | 500 | 248G | 354.0 | 9:43:57 | 8109 | 44824 |
| | | | | 248T | | | | |
| | | 276 | 1757 | 240C | 5.3 | 00+01+16 | 9937 | 630 |
| | | | | | | | 73 | 0 |
| | | 270 | 500 | 248G | 348.7 | 9:45:13 | 8036 | 44751 |
| | | | | 248T | | | | |
| | | 183 | 1780 | 240C | 6.9 | 00+01+40 | 9841 | 630 |
| | | | | | | | 96 | 0 |
| | | 178 | 500 | 248G | 341.8 | 9:46:54 | 7940 | 44655 |
| | | | | 248T | | | | |
| | | 108 | 1202 | 240C | 4.2 | 00+01+01 | 9783 | 630 |
| | | | | | | | 58 | 0 |
| | | 102 | 500 | 246G | 337.7 | 9:47:54 | 7883 | 44597 |
| | | | | 246T | | | | |
| | | 34 | 1980 | 240C | 5.7 | 00+01+22 | 9705 | 630 |
| | | | | | | | 78 | 0 |
| | | 29 | 500 | 249G | 332.0 | 9:49:16 | 7805 | 44520 |
| | | | | 249T | | | | |
| | | 53 | 1675 | 240C | 4.6 | 00+01+07 | 9642 | 630 |
| | | | | | | | 63 | 0 |
| | | 48 | 500 | 248G | 327.4 | 9:50:23 | 7741 | 44457 |
| | | | | 248T | | | | |
| | | 47 | 1156 | 240C | 3.3 | 00+00+49 | 9595 | 630 |
| | | | | | | | 47 | 0 |
| | | 42 | 500 | 246G | 324.1 | 9:51:12 | 7694 | 44409 |
| | | | | 246T | | | | |
| | | 14 | 1156 | 240C | 3.5 | 00+00+51 | 9546 | 630 |
| | | | | | | | 49 | 0 |
| | | 8 | 500 | 246G | 320.6 | 9:52:03 | 7646 | 44360 |
| | | | | 246T | | | | |
| | | 5 | 500 | 240C | 6.5 | 00+01+36 | 9455 | 630 |
| | | | | | | | 91 | 0 |

| DESCRIPTION | LATITUDE | MH | MSL | CAS | LEG | ETE | CONT | LOAD |
|--------------------|------------|-----|------|--------------|-------|-----------|-------------|----------|
| LEG# / TYPE | LONGITUDE | TH | AGL | GS | REM | ETA (Z) | LEG | ONLOAD |
| FIX / SVAR/FREQ/CH | MGRS | | | TAS | | ADTOT (Z) | AVAIL | GWT |
| | ELEV / MSA | | | | | | | |
| (b) (3) | | 0 | 500 | 244G 244T | 314.1 | 9:53:38 | 7555 | 44270 |
| | | 275 | 500 | 240C | 5.0 | 00+01+14 | 9385 70 | 630 0 |
| | | 270 | 500 | 244G 244T | 309.1 | 9:54:52 | 7484 | 44200 |
| | | 185 | 500 | 240C | 5.9 | 00+01+28 | 9301 84 | 630 0 |
| | | 180 | 500 | 244G 244T | 303.1 | 9:56:20 | 7401 | 44115 |
| | | 209 | 1734 | 240C | 7.3 | 00+01+46 | 9200 101 | 630 0 |
| | | 203 | 500 | 248G 248T | 295.8 | 9:58:06 | 7300 | 44015 |
| | | 276 | 1757 | 240C | 5.3 | 00+01+16 | 9127 73 | 630 0 |
| | | 270 | 500 | 248G 248T | 290.6 | 9:59:22 | 7227 | 43942 |
| | | 265 | 976 | 240C | 6.0 | 00+01+27 | 9044 83 | 630 0 |
| | | 260 | 500 | 246G 246T | 284.6 | 10:00:49 | 7144 | 43859 |
| | | 195 | 1484 | 240C | 2.8 | 00+00+41 | 9005 39 | 630 0 |
| | | 189 | 500 | 247G 247T | 281.8 | 10:01:30 | 7105 | 43820 |
| | | 182 | 1153 | 240C | 4.1 | 00+01+00 | 8948 57 | 630 0 |
| | | 177 | 500 | 246G 246T | 277.7 | 10:02:30 | 7049 | 43763 |
| | | 153 | 1156 | 240C | 3.6 | 00+00+53 | 8898 50 | 630 0 |
| | | 148 | 500 | 246G 246T | 274.1 | 10:03:23 | 6999 | 43714 |
| | | 207 | 1500 | 220C | 19.4 | 00+05+08 | 8639 259 | 630 0 |
| | | 202 | 1500 | 227G 227T | 254.7 | 10:08:31 | 6740 | 43455 |
| | | 184 | 1500 | 220C | 17.4 | 00+04+36 | 8408 231 | 630 0 |
| | | 179 | 1500 | 227G 227T | 237.3 | 10:13:07 | 6508 | 43224 |
| | | 211 | 1500 | 220C | 31.0 | 00+08+12 | 7996 412 | 630 0 |
| | | 206 | 1500 | 227G 227T | 206.3 | 10:21:18 | 6097 | 42811 |
| | | 237 | 1500 | 220C | 36.7 | 00+09+42 | 7510 486 | 630 0 |
| | | 232 | 1500 | 227G 227T | 169.6 | 10:31:00 | 5611 | 42326 |
| | | 235 | 1500 | 220C | 11.0 | 00+02+54 | 7365 145 | 630 0 |
| | | 230 | 1500 | 227G 227T | 158.7 | 10:33:54 | 5466 | 42181 |
| | | 239 | 1500 | 220C | 3.5 | 00+00+56 | 7318 47 | 630 0 |
| | | 234 | 1497 | 227G 227T | 155.1 | 10:34:50 | 5419 | 42134 |

| WP# / TAG | LATITUDE | MH | MSL | CAS | LEG | ETE | CON1 | LOAD |
|--------------------|------------|-----|------|----------------|-------|----------------------|--------------|-------------|
| DESCRIPTION | LONGITUDE | | | | | | LEG | ONLOAD |
| LEG# / TYPE | MGRS | TH | AGL | GS TAS | REM | ETA (Z) ADTOT (Z) | AVAIL | GWT |
| FIX / SVAR/FREQ/CH | ELEV / MSA | | | | | | | |
| (b)(3) | | 243 | 1500 | 115C | 4.7 | 00+02+21 | 7196 122 | 630 0 |
| | | 238 | 1500 | 119G 119T | 150.5 | 10:37:11 | 5297 | 42012 |
| | | 308 | 1500 | 115C | 3.1 | 00+01+33 | 7116 80 | 630 0 |
| | | 302 | 1172 | 119G 119T | 147.4 | 10:38:44 | 5217 | 41932 |
| | | 232 | 1500 | 80C | 2.8 | 00+02+02 | 7022 94 | 630 0 |
| | | 228 | 1333 | 83G 83T | 144.6 | 10:40:46 | 5123 | 41838 |
| | | 193 | 1500 | 180C | 0.0 | 00+00+01 | 7021 1 | 630 0 |
| | | 188 | 1336 | 186G 186T | 144.6 | 10:40:47 | 5122 | 41837 |
| | | 193 | 1500 | 80C# | 0.0 | 00+40+00 | 5200 1821 | 630 0 |
| | | 188 | 1336 | 83G# 83T# | 144.6 | 11:20:47 | 3301 | 40016 |
| | | 100 | 1500 | 180C | 19.2 | 00+06+13 | 4949 251 | 630 0 |
| | | 94 | 1500 | 186G 186T | 125.3 | 11:27:00# | 3050 | 39765 |
| | | 5 | 1500 | 180C | 8.6 | 00+02+47 | 4837 112 | 630 0 |
| | | 0 | 1500 | 186G 186T | 116.7 | 11:29:47 | 2938 | 39653 |
| | | 40 | 1500 | 180C | 40.0 | 00+12+56 | 4318 519 | 630 0 |
| | | 35 | 1500 | 186G 186T | 76.7 | 11:42:42 | 2419 | 39134 |
| | | 41 | 1500 | 127C# | 0.0 | 01+00+00 | 2205 2113 | 630 4000 |
| | | 35 | 1500 | 131G# 131T# | 76.7 | 12:42:42 | 4306 | 41021 |
| | | 228 | 1500 | 220C | 50.0 | 00+13+14 | 1549 656 | 630 0 |
| | | 222 | 1497 | 227G 227T | 26.7 | 12:55:56 | 3650 | 40365 |
| | | 218 | 1500 | 220C | 9.5 | 00+02+31 | 1425 124 | 630 0 |
| | | 214 | 1497 | 227G 227T | 17.2 | 12:58:27 | 3526 | 40241 |
| | | 222 | 1500 | 220C | 7.8 | 00+02+04 | 1323 102 | 630 0 |
| | | 217 | 1461 | 227G 227T | 9.4 | 13:00:30 | 3424 | 40139 |
| | | 253 | 1500 | 220C | 7.0 | 00+01+50 | 1232 91 | 630 0 |
| | | 248 | 1500 | 227G 227T | 2.5 | 13:02:21 | 3333 | 40048 |
| | | 307 | 1500 | 220C | 2.4 | 00+00+39 | 1200 32 | 630 0 |
| | | 302 | 1252 | 227G 227T | 0.0 | 13:02:59 | 3301 | 40016 |

(b)(6)
(b)(3)
10 U.S.
Code §
130b

| | | |
|----------------------|------------------|------------------|
| | MODEX | |
| | CREW | |
| | COPILOT | |
| | 1 - | 50 - .LP1 |
| | (DEPARTURE) | (DESTINATION) |
| ICE TEMP / WINDS | 20.0 °C / 0/0 | 29.2 °C / 0/0 |
| ICE PA / SURFACE DA | 369 ft / 1040 ft | 251 ft / 1941 ft |
| R ENGINES / ANTI-ICE | 100 % / Off | 100 % / Off |
| | | |
| SIC WEIGHT | 35205 lbs | 35205 lbs |
| EW | 1120 lbs | 1120 lbs |
| IC (MSN SPEC. KITS) | 150 lbs | 150 lbs |
| ERATING WEIGHT | 36475 lbs | 36475 lbs |
| EL | 11000 lbs | 4548 lbs |
| LOAD | 0 lbs | 0 lbs |
| SSION WEIGHT | 47475 lbs | 41023 lbs |

| | | | | |
|---------------|-------|------------------|-------|------------------|
| | C.G. | LIMITS (FWD-AFT) | C.G. | LIMITS (FWD-AFT) |
| MODE (inches) | 382.6 | 379.2 - 395.1 | 383.2 | 377.9 - 394.8 |
| MODE (inches) | 393.2 | 389.7 - 405.6 | 395.4 | 390.0 - 406.9 |

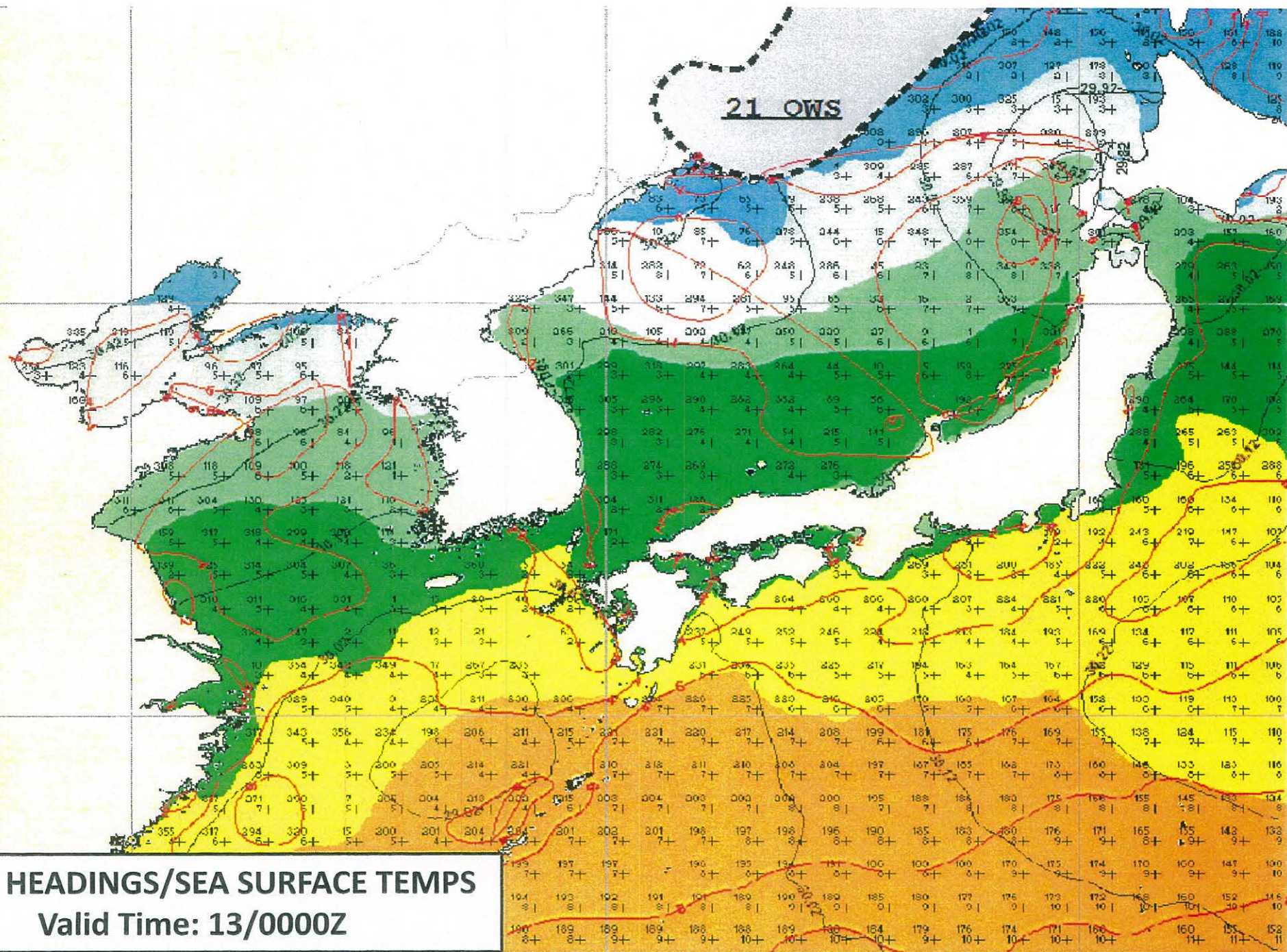
| | | 1 - | | | 50 - .LPI | | |
|--------------------|-------|-------------|------|------------|---------------|------|------------|
| | | (DEPARTURE) | | | (DESTINATION) | | |
| TORQUE AVAIL (N/I) | (a) | (N) | 100% | / (I) 117% | (N) | 100% | / (I) 117% |
| TORQUE REQ (HOGE) | (b) | (N) | 100% | / (I) 94% | (N) | 79% | / (I) 77% |
| TORQUE REQ (HIGE) | (c) | (N) | 93% | / (I) 88% | (N) | 73% | / (I) 71% |
| TORQ MARG (HOGE) | (a-b) | (N) | 0% | / (I) 23% | (N) | 21% | / (I) 40% |
| TORQ MARG (HIGE) | (a-c) | (N) | 7% | / (I) 29% | (N) | 27% | / (I) 46% |

| | | | |
|-----------------|-------|-----------|-----------|
| IOGE WT WITH | | 5 %TM | 5 %TM |
| JE MARGIN (I) | (d) | 52060 lbs | 51701 lbs |
| TING WEIGHT | (e) | 36475 lbs | 36475 lbs |
| LL PAYLOAD | (d-e) | 15585 lbs | 15226 lbs |
| IOGE WEIGHT (I) | | | |
| TORQUE MARGIN) | (f) | 53184 lbs | 52812 lbs |

| | | | | |
|-----------------------|-------------------------|--|---------------------|--|
| FLIGHT DATA | WORST CASE LEG - 2 | | BEST CASE LEG - 51 | |
| | 3 - .TURN06 | | 50 - .LP1 | |
| ICE TEMP / SURFACE PA | 28.9 °C / 360 ft | | 29.2 °C / 251 ft | |
| JDE / TEMP DEV | 4500 ft / 14.4 °C | | 1500 ft / 14.5 °C | |
| ON WEIGHT | 47703 lbs | | 41335 lbs | |
| R REQ / MHGW 0% TM | (g) 96% / 52720 lbs | | 77% / 52812 lbs | |
| ANGE AIRSPEED | (h) 216 KCAS | | 217 KCAS | |
| NDURANCE AIRSPEED | (i) 140 KCAS | | 126 KCAS | |
| LT (APLN MODE) | (j) 21909 ft @ 128 KCAS | | 25000 ft @ 133 KCAS | |
| VELOPE (APLN MODE) | (k) 135 to 261 KCAS | | 124 to 268 KCAS | |
| CRUISE ALTITUDE | (l) 18790 ft | | 22374 ft | |

| | | | | |
|------------------------|------------------------|-----------|---------------------|-----------|
| STALL SPEEDS | WORST CASE | | BEST CASE | |
| | POWER-ON | POWER-OFF | POWER-ON | POWER-OFF |
| REES ANGLE OF BANK (m) | 113 KCAS | 119 KCAS | 104 KCAS | 110 KCAS |
| REES ANGLE OF BANK (n) | 123 KCAS | 130 KCAS | 112 KCAS | 119 KCAS |
| REES ANGLE OF BANK (o) | 140 KCAS | 148 KCAS | 126 KCAS | 134 KCAS |
| LE ENGINE LEVEL FLIGHT | WORST CASE (95% ENG) | | BEST CASE (95% ENG) | |
| LT OEI (APLN MODE) | (a) 8030 ft @ 114 KCAS | | 12044 ft @ 114 KCAS | |
| VELOPE | | | | |
| VELOPE | | | | |

(b)(6)
(b)(3)
10 U.S.
Code §
130b



del: 17KM GALWEM
- 110KM WW3
- 110KM DAF
del Run: Tue 12 Dec 00Z
ocast Hour: 00L
id Time: Tue 12 Dec 00Z



FBJP DOMESTIC SIGW- PROG

VALID : 131200 UTC Dec 2016

ISSUED : 130626 UTC Dec 2016

Aviation Weather Center / JMA

Symbols

- Turb (MOD, SEV)
- Icing (MOD, SEV)
- Mountain waves (MOD if not remarked)
- Thunderstorm

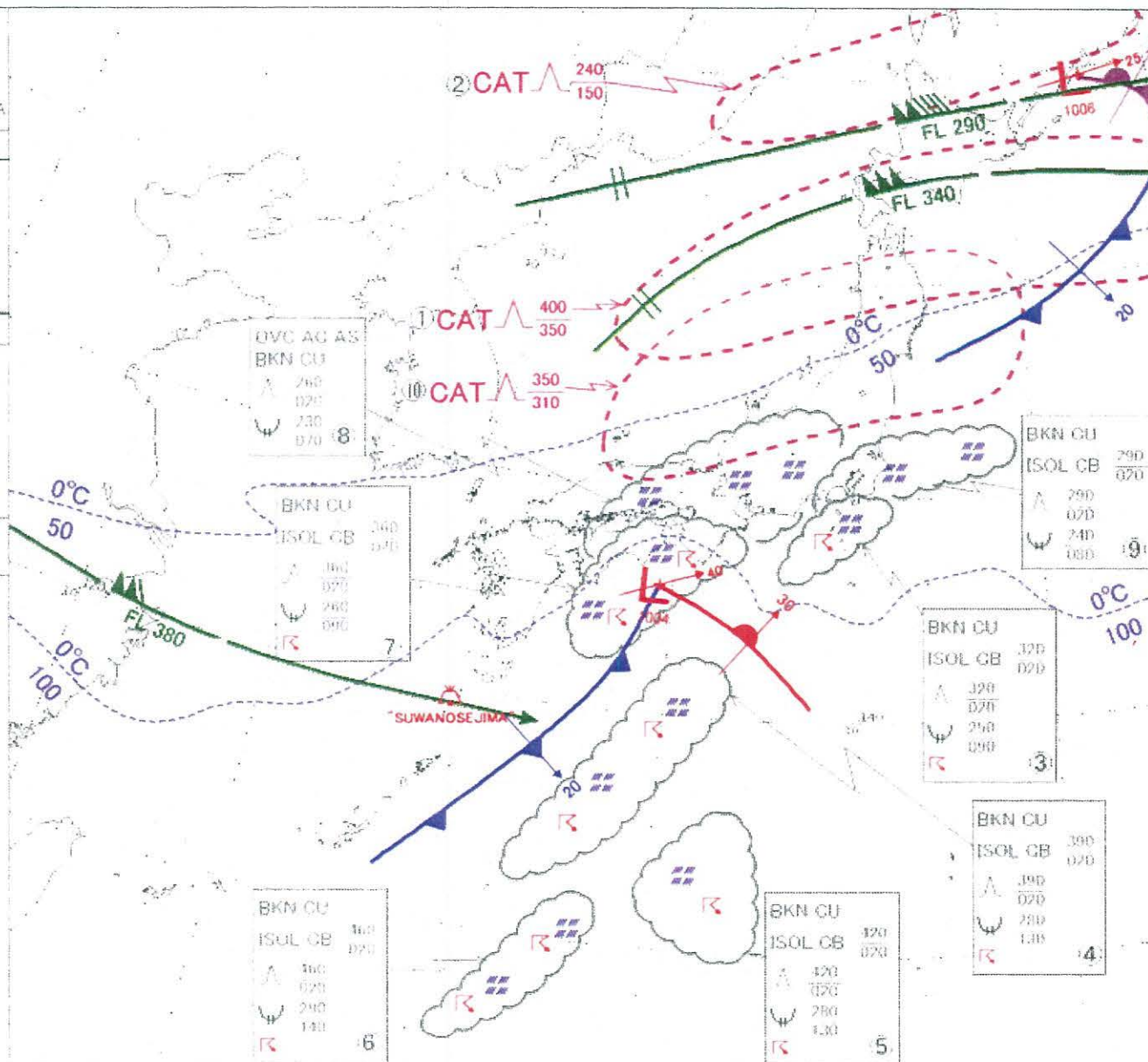
Abbreviations

VWS : Vertical Wind Shear
HWS : Horizontal Wind Shear
TVB : Transverse Band
UCA : Upper Cold Air
USAM : Unstable Air Mass
LCVG : Lower Convergence
LWHA : Lower Warm and Humid Air
CVX : Cold Vortex

Other symbols or abbreviations are in accordance with ICAO regulation

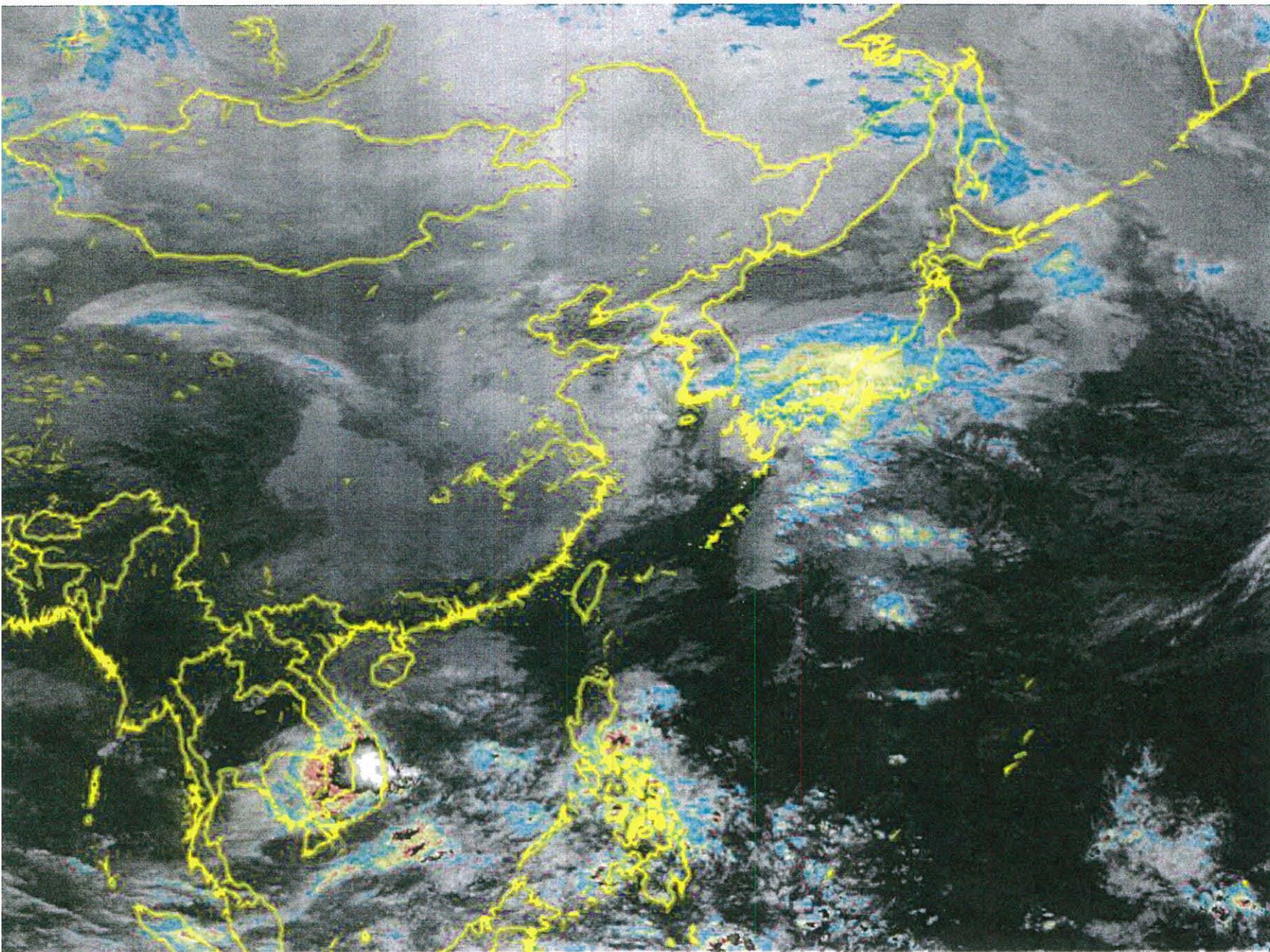
REMARKS

- ①MOV ENE 30KT (TROP VWS)
- ②ALMOST STNR (JET FRONT VWS HWS)
- ③MOV NE 20KT (LCVG LWHA)
- ④MOV ENE 30KT (LCVG LWHA)
- ⑤MOV E 30KT (LCVG LWHA)
- ⑥MOV E 30KT (LCVG LWHA)
- ⑦MOV ENE 40KT (LOW FRONT)
- ⑧MOV ENE 30KT (LCVG LWHA)
- ⑨MOV NE 20KT (LCVG LWHA)
- ⑩MOV ENE 30KT (TVB)



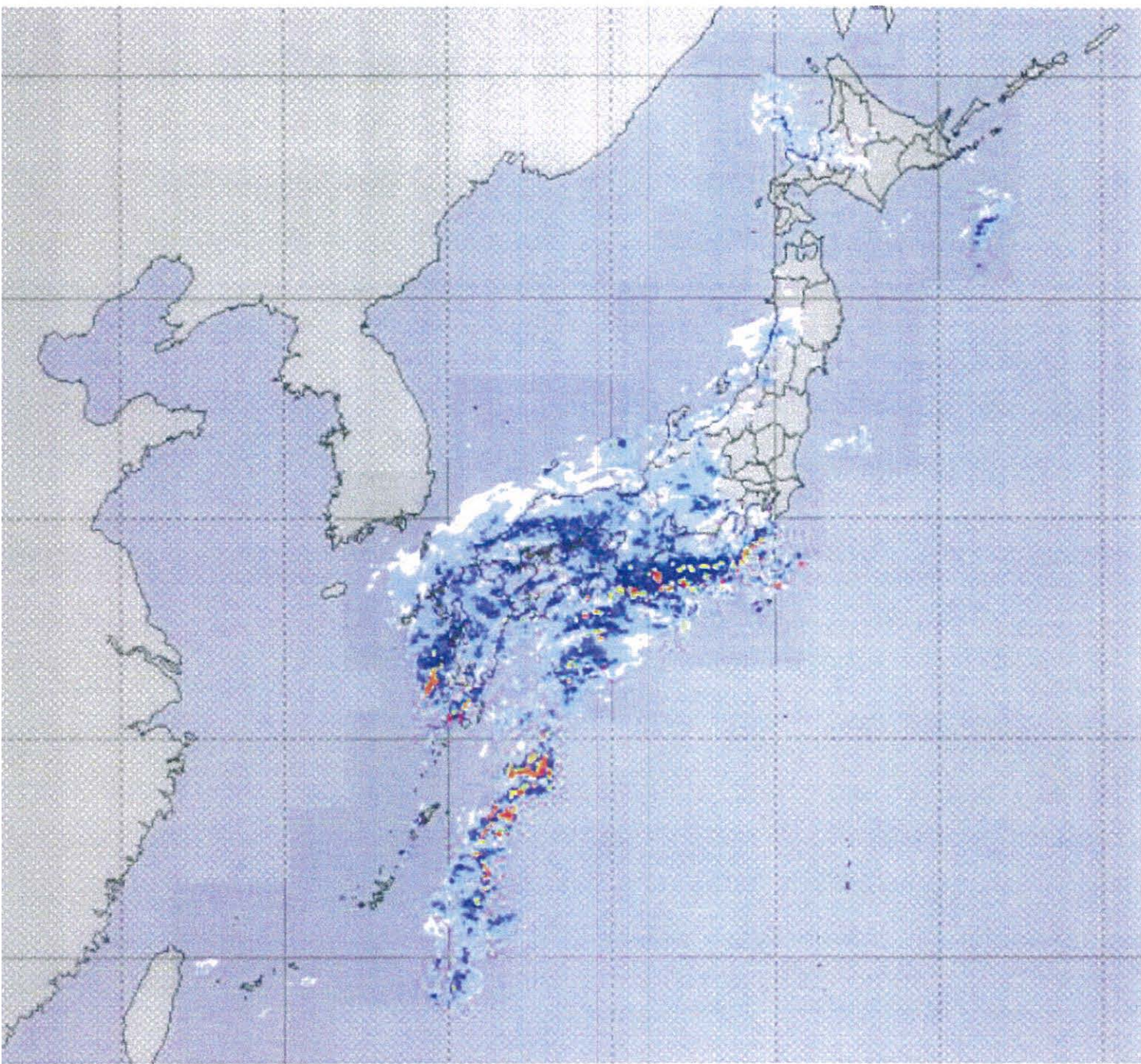
HWD

**Valid Time:
13/1200Z**



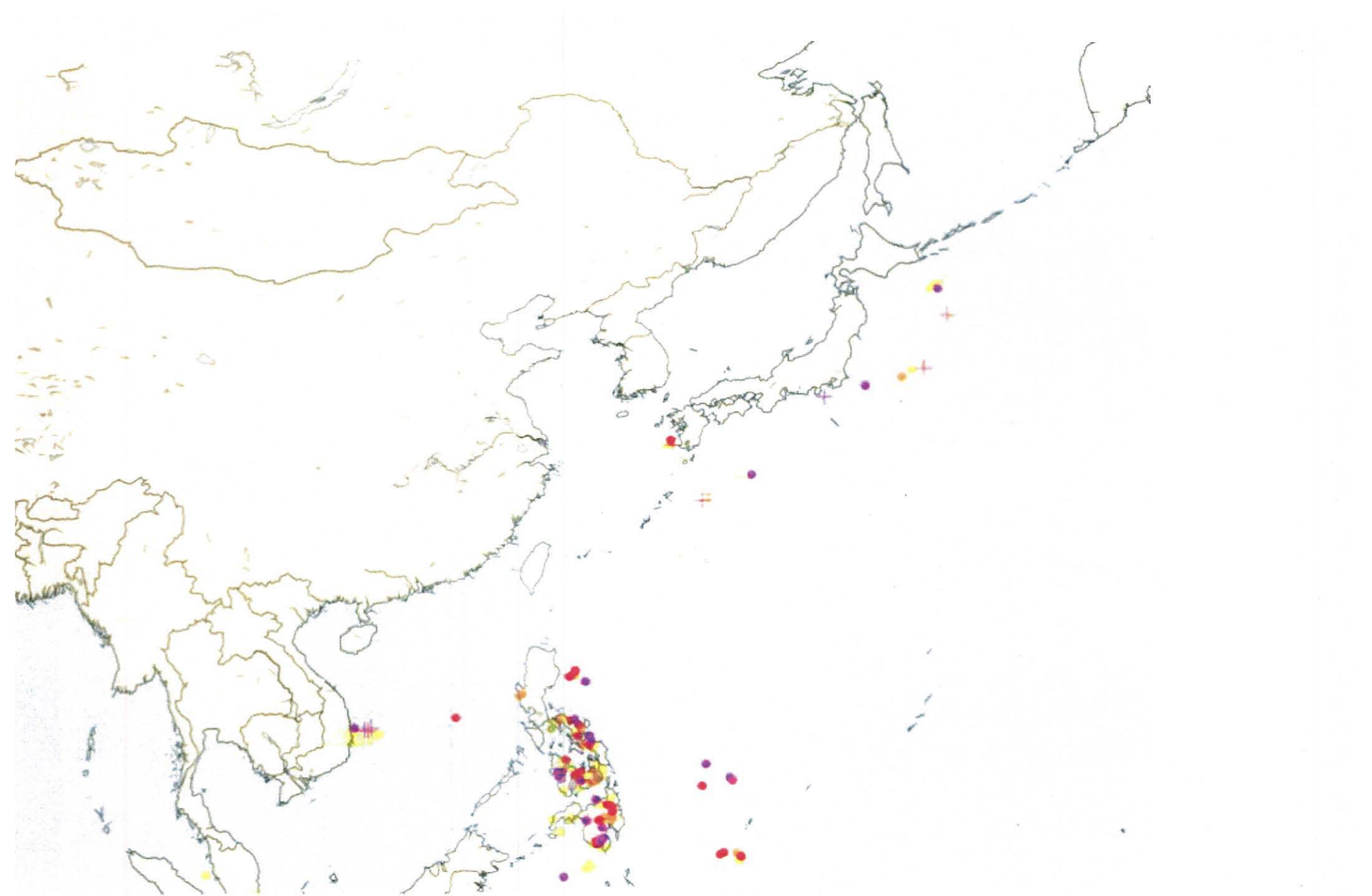
IR SATELLITE

Valid time: 13/0730Z



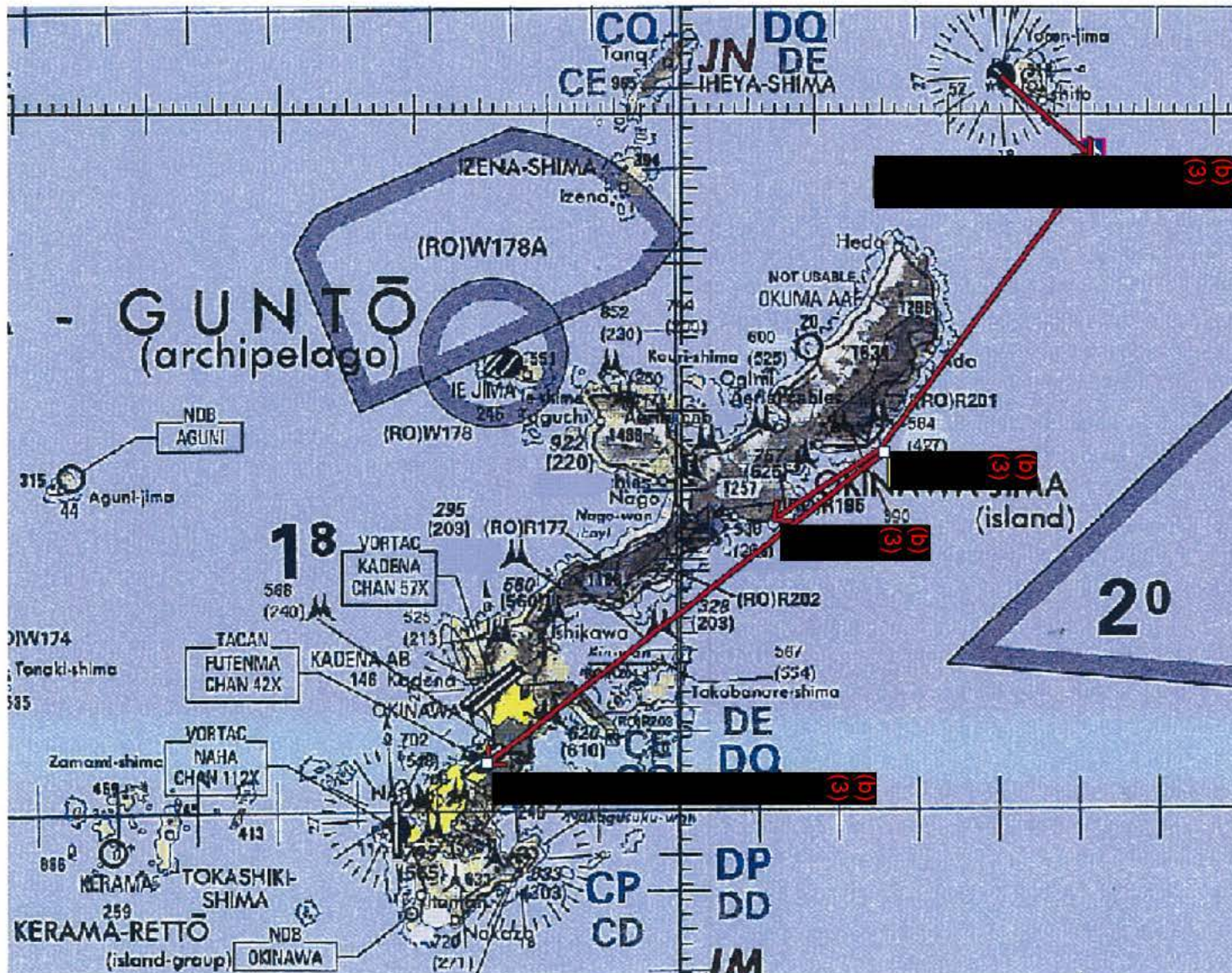
RADAR

Valid Time: 13/0740Z



LIGHTNING

Valid time: 13/0740Z



Divert Card not briefed or in the flight Smartpack

At the time of the drogue strike, DN 06 was less than 8nm away from the runway at Yoron Jima

Crew elected to proceed to Futenma which at the time was over 58nm away.

Distance traveled to site of the water landing was approximately 40nm.

Enclosure 23

DN06 Recovered Flight Data Warnings, Cautions, and Advisories

113 pages

Withheld in accordance with FOIA Exemption (b)(1); mosaic approach

Enclosure 24

DN06 Recovered Flight Data Flight Recreation

Excel spreadsheet

Withheld in accordance with FOIA Exemption (b)(1); mosaic approach

VMM-265 PRE-MISHAP PLAN

ODO TRACKER

| STEP # | TIME DUE | INITIATED BY | TIME COMPLETED |
|--|----------|-----------------------------------|----------------|
| 0 - OVERDUE AIRCRAFT PROCEDURES | IMMED | | |
| 1 - RECEIPT OF NOTIFICATION | IMMED | (b)(6) (b)(3) 10 U.S. Code § 130b | 2145-2150 |
| 2 - NOTIFY THE CO/XO | IMMED | | 2148 |
| 3 - NOTIFY EMERGENCY SERVICES | IMMED | | 2155 |
| 4 - VERIFY SEARCH AND RESCUE (SAR) HAS BEEN LAUNCHED | IMMED | | 1249Z |
| 5 - MISHAP DETERMINATION | IMMED | | 2240 |
| 6 - ODO GET ASSISTANCE | IMMED | | 2153 |
| 7 - ODO GENERAL INSTRUCTIONS | IMMED | | 2200 |
| 8 - IMMEDIATE REPORTS | IMMED | | 2310 |
| 9 - OPREP-3 VOICE REPORT | 0+15 | | 2209 |
| 10 - RECALL | 0+30 | | 2210 |
| 11 - NOTIFY PUBLIC AFFAIRS OFFICER (PAO) | 0+30 | | 2305 |
| 12 - IMPOUND PERTINENT DOCUMENTATION | 0+30 | | 2231 |
| 13 - CRASH SITE WEATHER OBSERVATION | 1+00 | | 2235 |
| 14 - TELEPHONE TOWER SUPERVISOR | 1+00 | | 2247 |
| 15 - RELEASE INFORMATION TO THE PAO | 1+00 | | |
| 16 - OPREP-3 MESSAGE | 1+00 | | 2343 |
| 17 - NAVAL SAFETY CENTER NOTIFICATION | 1+00 | | 2140 |
| 18 - COORDINATED WITH MEDICAL TO DRAW LAB SAMPLES | 1+00 | | |
| 19 - PERSONNEL CASUALTY REPORT (PCR) | 1+00 | | N/A |
| 20 - UPDATE INCIDENT REPORT FROM STEP 3 | 2+00 | | 0009 0025 |
| 21 - AMB, SENTRIES, EOD, ERT TO THE CRASH SITE | 2+00 | | 0030 |
| 22 - CACO PROCEDURES | 4+00 | | |
| 23 - INITIAL MISHAP DATA REPORT (MDR) | 4+00 | | |
| 24 - AMENDED MDR | 48+00 | | |

-W/in 4h

Confirmed at 2309

(b)(6)
(b)(3)
10 U.S.

(b)(6)

- 2316 Crash fire rescue has been notified to coordinate a security detachment for securing the site.
- 2327 Jolly II still on scene for recovery.
- 2328 Futerna PMO is coordinating with Schwab PMO/Hansen PMO for coordination of securing site.
- 2334 Received via text - two crew chiefs recovered in Jolly II. One pilot being situated into rescue basket.
- 2345 PMO enroute to cordon crash site. Schwab PMO will provide
- 2348 (b)(6) (b)(3) 10 U.S. Code § 130b called - all personnel recovered.
- Two critical personnel @ Foster hospital.
 - Jolly aircraft will attempt to stay on station until security personnel can cordon the site.
 - Three personnel en route to hospital.
- 2352 Schwab PMO called five personnel enroute to cordon the site.
- 2358 Rescue complete. 2 criticals arrived at Foster Hospital at 2340. 3 routine arrived 0010.
- 2035 Approx 30 minutes ago crash fire rescue launched a boat to crash site.
- 2035 Schwab PMO on scene at crash site.
- 2050 Initial phone call made at 0005 to Head Quarters Casualty assistance Branch.

13 DEC 2016

CO

(b)(6) (b)(3) 10 U.S.
Code § 130b

OPSO

out/in

ODO

(b)(6) (b)(3) 10 U.S. Code §
130b

0515

I, (b)(6) (b)(3) 10 U.S. Code § 130b, have assumed the duties of VMM-265 ODO.

0600

Dragon 01 + 02 briefed.

0830

Dragon 01 + 02 outbound.

0930

Dragon 03 + 04 briefed.

* 0715

Dragon 71 briefed.

1130

Dragon 01 + 02 SOD.

1203

Dragon 03 + 04 outbound.

1502

I have been properly relieved by

(b)(6) (b)(3) 10 U.S. Code §
130b

1503

Dragon 03 + 04 outbound.

1616

DRAGON 03 + 04 ON DECK FOR PAX DROP.

1655

DRAGON 03 + 04 ON DECK

1755

DRAGON 05 + 06 OFF DECK

1800

I, (b)(6) (b)(3) 10 U.S. Code § 130b, HAVE BEEN PROPERLY RELIEVED BY

(b)(6) (b)(3) 10 U.S.
Code § 130b

2000

DRAGON 05 RETURN FOR AVIONICS TROUBLESHOOTING.

2140

(b)(6) (b)(3) 10 U.S. Code § 130b CALLS, WARHORSE 22 REPORTED PRAGON

AIRCRAFT MAYDAY CALL.

2145

MISHAP PLAN INITIAD.

13 DEC

2135 000 Notified of DNO6

2140

2144 Mishaps steps started

2145 XO notified

2145 XO notified

2152 (b)(6) (b)(3) 10 U.S. called IN

2153 (b)(6) (b)(3) 10 U.S. Code § 130b called in.

2157 (b)(6) (b)(3) 10 U.S. Code § 130b called with all (5) personnel accounted for from Dragon Ob.

2200 Futenma ~~hangar~~ Crash fire rescue arrived at Bldg 539.

2206 Command Post notified (5) personnel in life raft.

2207 CO and OPSO on deck.

2215 APR, NATOPS and Logbooks secured for all aircrew.

2238 Tiger 13 outbound from ROTM to MESAAP site.

Warhorse 22 on station. Jolly 11/12 awaiting PT to launch.

2245 1-60 is outbound from 30350G (Jolly 11)

Jabber is overhead. 1-H-60 is spinning up.

2255 Jolly 11/12 is 5 minutes out.

2257 Jolly 11 on scene

2302 Tiger 14 (relay for Tiger 13) Jolly 11 lifting aircrew from ~~site~~

2307 AC 04 maintenance records locked in SPAWAR.

2313 (b)(6) (b)(3) 10 U.S. Code § 130b updated aircraft position - aircraft in two feet of water near shoreline.



UNITED STATES MARINE CORPS

MARINE AVIATION TRAINING SYSTEM SITE FUTENMA
1st MARINE AIRCRAFT WING AVIATION TRAINING SYSTEM
MCAS FUTENMA, OKINAWA, JAPAN
UNIT 37301
FPO AP 96386-7301

IN REPLY REFER TO:

5800.7

MATSS

01 FEB 16

From: (b)(6) (b)(3) 10 U.S. Code § 130b Command Investigator ICO 13 DEC16
MV-22B Mishap
To: (b)(6) (b)(3) 10 U.S. Code § 130b MV-22B Class Desk, PMA-275
Subj: REQUEST FOR PMA-275 AND NAVAIR ASSISTANCE
Ref: (a) JAGINST 5800.7f (JAGMAN)
(b) 16 DEC 16 MV-22B Mishap Command Investigation
Appointment Letter

1. As the appointed Command Investigator into the facts and circumstances surrounding the MV-22B mishap on 13 DEC 16 in vicinity of Okinawa, Japan, I request the assistance of the MV-22B Class Desk, PMA-275 in coordinating and collecting evidence and information essential to this matter.

2. Flight recorder data, and pertinent information already collected in the conduct of this investigation will be shared with the MV-22B Class Desk, PMA-275, NAVAIR and industry specialists.

3. All shared information is to be considered to be For Official Use Only (FOUO).

4. The point of contact in this matter is (b)(6) (b)(3) 10 U.S. Code § 130b and can be reached at (b)(6) (b)(3) 10 U.S. Code § 130b.

(b)(6) (b)(3) 10 U.S. Code § 130b

Enclosure 27

Statement provided by REDACTED

2 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 28

Statement provided by REDACTED

4 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 29

Statement provided by REDACTED

3 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 30

Statement provided by REDACTED

4 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 31

Statement provided by REDACTED

3 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 32

Statement provided by REDACTED

2 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Enclosure 33

Engineering Analysis and Supporting Data Quick Report for JAG Investigation MV-22B; BuNo:
168027; Mishap Date (12 DEC 2016)

30 pages

Withheld in accordance with FOIA Exemption (b)(5)

Enclosure 34

Engineering Analysis Quick Report MV-22; BuNo: 168027 Incident Date (12-December-2016)

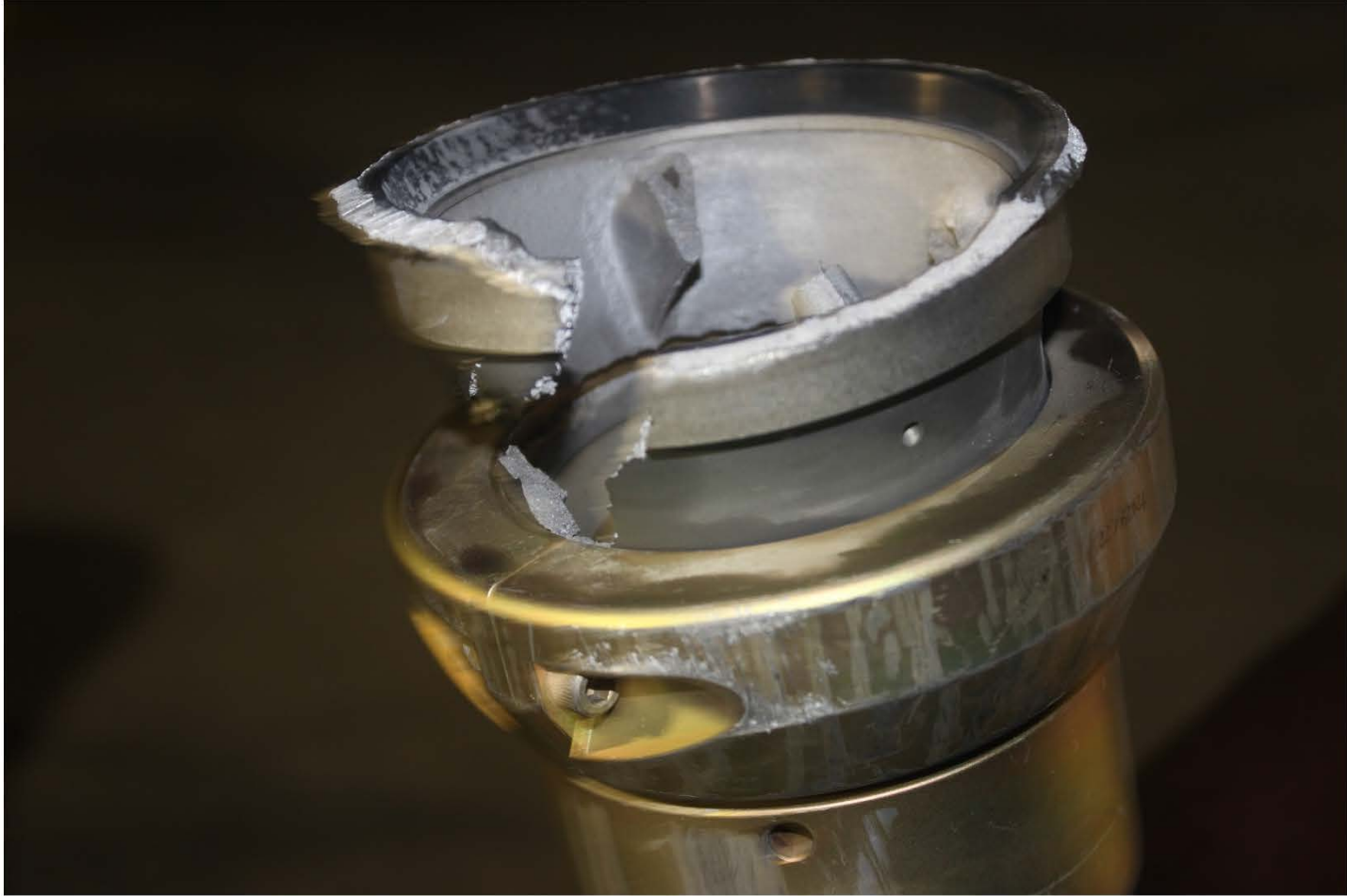
10 pages

Withheld in accordance with FOIA Exemption (b)(5)



(b)(6) (b)(3) 10 U.S.
Code § 130b













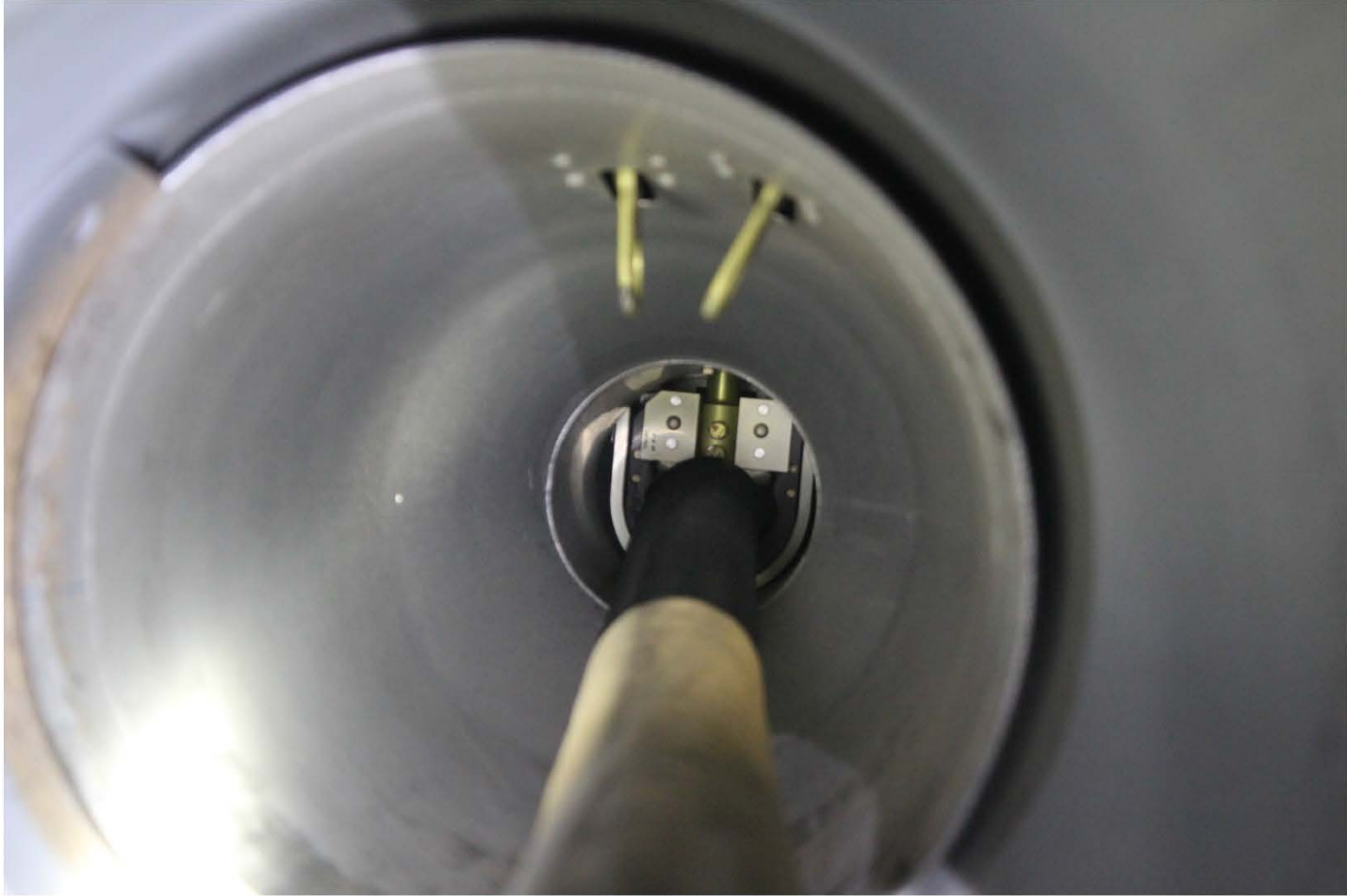








(b)(6) (b)(3) 10 U.S.
Code § 130b



























Performance Standards

1. Maintain proper position during NVD LLL division landings IAW the NTTP.
2. Maintain assigned landing heading within 10 degrees.
3. Lead ship land within 100 m of the waypoint. Wingmen land within 30 secs and 100 m.
4. With discrete landing waypoints, lead and wingmen each land within 100 m of their assigned waypoint within 30secs.
5. Maintain the proper formation position for division CALs.
6. Maintain the proper glideslope/departure profile for obstacle clearance.
7. Maintain awareness of all wingmen and provide adequate landing area during NVD LLL CALs.
8. Maintain flight integrity during NVD division CALs.

Instructor. NSI.

Prerequisites. NS-2336, NS-2382.

External Syllabus Support. Suitable landing site with 7nm radius of protected airspace to 1000' AGL.

2.11.9 Air to Air Refueling (AAR)

2.11.9.1 Purpose. To develop proficiency in day and NVD AAR.

2.11.9.2 General

All maneuver descriptions are in the NTTP and ATP-56B.

A minimum of 5 contacts and movement to the refueling position are required to successfully complete each initial flight.

An AARI is required for all initial sorties. Aircrew who have completed their initial AAR sortie (day or night) and have lost proficiency in that sortie may regain proficiency by flying with an aircraft commander who is proficient in that sortie.

Crew Requirements. P/P for simulators, P/P/CC for day aircraft events, P/P/CC/AO for night aircraft events.

24 Oct 14

ACAD-2410 0.5 * B,T,R CLS

MV-22 Air to Air Refueling Lecture

Goal. The PUI will have a familiarity with MV-22 air to air refueling.

Instructor. AARI.

Prerequisite. ACAD-2160. Required Reading - NATOPS 9.2, NTTP Ch 6, ATP-56B Part 1 (Ch 1, Annex 1A, Ch 2, Ch 3 paragraph 3001, 3002, 3005, 3006, 3007), ATP-56B Part 2 (Ch 1 para 1001-1006, 1010-1012, Annex 1a-1g, Ch 2, Annex 2g, Ch 3-4, Ch 5 para 506, 510-514, Annex 5a-5c).

SAAR-2430 1.0 * B,T S 1 FFS/FTD

Goal. Introduce day AAR.

Requirements

1. Discuss:

- a. AAR terminology.
- b. CRM during AAR and crew comfort level.
- c. Rendezvous procedures, both VMC and IMC.
- d. AAR performance envelope and limitations.
- e. Cross-overs.
- f. Inadvertent disconnects.
- g. Emergency disconnect.
- h. EMCON refueling.
- i. MOA and Warning area procedures.
- j. AAR aircraft configurations.

2. Introduce:

- a. Basic scan and flight techniques required for AAR.
- b. Medium and high altitude, high gross weight AAR profiles.
- c. Rendezvous (minimum of 2 for initial events).
- d. Join-up.
- e. Contact/fuel transfer.
- f. Post AAR procedures.
- g. Emergency breakaway.

24 Oct 14

Performance Standards

1. Demonstrate proper knowledge of AAR procedures IAW the NTTP and the ATP-56.
2. Recognize proper visual reference points IAW the NTTP.

Instructor. AARI.Prerequisites. SFORM-2180, ACAD-2410. Required Reading - NTTP Ch 6.

| | | | | | | |
|----------|-----|-----|-------|---|---|-------|
| AAR-2431 | 1.5 | 365 | B,T,R | A | 1 | MV-22 |
|----------|-----|-----|-------|---|---|-------|

Goal. Introduce day AAR.Requirements

1. Discuss:
 - a. AAR planning and coordination (AAR card).
 - b. CRM during AAR and crew comfort level.
 - c. Rendezvous procedures.
 - d. Enroute AAR considerations.
 - e. Fuel boost.
 - f. Cross-under.
 - g. Reel response.
 - h. Inadvertent disconnects.
 - i. Fuel siphoning.
 - j. Emergency disconnect.
2. Introduce:
 - a. Rendezvous (minimum of 2).
 - b. Tanker flow.
 - c. Contact/fuel transfer (minimum of 5 for initial events).
 - d. Post AAR procedures.
 - e. Emergency breakaway.

Performance Standards

1. Execute proper AAR procedures IAW the NTTP and the ATP-56.
2. Maintain proper visual reference points IAW the NTTP.

24 Oct 14

3. Execute 5 successful contacts with 5 minutes sustained contact (actual or simulated fuel transfer).

Instructor. AARI.

Prerequisites. FORM-2182, SAAR-2430.

External Syllabus Support. Approved tanker.

| | | | | | | | |
|-----------|-----|---|-----|----|---|---|---------|
| SAAR-2432 | 1.0 | * | B,T | NS | S | 1 | FFS/FTD |
|-----------|-----|---|-----|----|---|---|---------|

Goal. Introduce night aided AAR.

Requirements

1. Discuss:
 - a. CRM during NVD AAR.
 - b. Comfort level.
 - c. Closure rates.
 - d. Depth perception.
 - e. Receiver/tanker lighting.
 - f. Visual illusions.
 - g. Inadvertent IMC.
 - h. Emergency procedures.
 - i. Visual signals.
 - j. Tanker sequence.
2. Introduce. NVD AAR.

Performance Standards

1. Demonstrate proper knowledge of night/NVD AAR procedures IAW the NTTP and the ATP-56.
2. Recognize proper night/NVD visual reference points IAW the NTTP.

Instructor. AARI.

Prerequisites. SNS-2330, SAAR-2430. Required Reading - NTTP Ch 6, MAWTS-1 NVD Manual.

| | | | | | | | |
|----------|-----|-----|---------|----|---|---|-------|
| AAR-2433 | 1.5 | 365 | B,T,R,M | NS | A | 1 | MV-22 |
|----------|-----|-----|---------|----|---|---|-------|

Goal. Review NVD AAR.

Requirements. Introduce night AAR while using NVDs.

1. Discuss:

- a. CRM during NVD AAR.
- b. Comfort level.
- c. Closure rates.
- d. Depth perception.
- e. Receiver/tanker lighting.
- f. Visual illusions.
- g. Inadvertent IMC.
- h. Emergency procedures.
- i. Visual signals.
- j. Tanker sequence.
- k. NVD failures.
- l. NVD rendezvous.
- m. Simultaneous/alternate AAR operations.
- n. Threat response during AAR operations.

2. Introduce:

- a. Rendezvous (minimum of 2).
- b. Tanker flow.
- c. Contact/fuel transfer.
- d. Post AAR procedures.
- e. Emergency breakaway.
- f. EMCON tanker procedures (EMCON condition 3 or 4).

Performance Standards

- 1. Execute proper AAR procedures IAW the NTTP and the ATP-56.
- 2. Maintain proper visual reference points IAW the NTTP.
- 3. Execute 5 successful contacts with 5 minutes sustained contact (actual or simulated fuel transfer).

Instructor. AARI.

24 Oct 14

Prerequisites. AAR-2431, SAAR-2432, 2336~NS, 2335~LLL (NSQ for the appropriate light level).

External Syllabus Support. Approved tanker.

2.11.10 Tail Gunnery (TG)

2.11.10.1 Purpose. To develop the ability to control the employment of the MV-22 ramp mounted weapon system.

2.11.10.2 General. At the completion of this stage, the PUI will demonstrate the ability to control the employment of the MV-22 ramp mounted weapon system from a hover, approaching the landing zone, departing the landing zone and enroute to the landing zone. Either the M240D or the GAU-16/21, may be used to satisfy the flight events in this stage.

2.11.10.3 Crew Requirements. P/P/CC/AO for aircraft events.

ACAD-2510 0.5 * B,T CLS

M240D Familiarization Lecture

Goal. The PUI will have a familiarity with the operation of the M240D ramp mounted weapon system.

Instructor. TGI.

Prerequisite. T2P. Required Reading - NTRP, NTTP Ch 7.

ACAD-2511 0.5 * B,T CLS

GAU-16 Familiarization Lecture

Goal. The PUI will be familiar with operation of the GAU-16 ramp mounted weapon system.

Instructor. TGI.

Prerequisite. T2P. Required Reading - NTRP.

ACAD-2512 0.5 * B,T CLS

GAU-21 Familiarization Lecture

Goal. The PUI will be familiar with operation of the GAU-21 ramp mounted weapon system.

Instructor. TGI.

Prerequisite. T2P. Required Reading - NTRP.

| | | | | | | | | |
|---|------------|---------------------------|------|--------------|------|------------------------|-------------|-------------|
| T/O TIME (Z): 00:00:00 | | FLTPLN: Route1.jrt-Path1 | | | | TOT FUEL ONBOARD: 1932 | | |
| LDG TIME (Z): 00:21:42 | | DTG: 26-Jan-2017 06:58:44 | | | | FUEL REQUIRED: 1553 | | |
| ETE: 00+21+42 | | TOTAL DIST: 77.5 | | | | LDG FUEL ONBOARD: 979 | | |
| DRAGON 06 SHARK EP TO ROTM VIA COURSE RULES | | MSN REPOSITORY: | | | | MSN BINDER: | | |
| | | HDG | ALT | SPD | DIST | TIME | FUEL | REMARKS |
| TP# / WP#/TAG | LATITUDE | MH | MSL | CAS | LEG | ETE | CONT | LOAD |
| DESCRIPTION | LONGITUDE | | | | | | LEG | ONLOAD |
| LEG# / TYPE | MGRS | | | GS | | ETA (Z) | | |
| FIX / SVAR/FREQ/CH | ELEV / MSA | TH | AGL | TAS | REM | ADTOT (Z) | AVAIL | GWT |
| (b) (3) | | | 1500 | | | | | |
| | | | 1500 | | 77.5 | 0:00:00 | 1932 | 38174 |
| | | 234 | 1500 | 200C | 16.0 | 00+04+28 | 1357 196 | 370 1932 |
| | | 229 | 1500 | 215G 207T | 61.5 | 0:04:28 | 1736 | 37978 |
| | | 219 | 1500 | 200C | 24.3 | 00+06+38 | 1065 292 | 370 0 |
| | | 214 | 1500 | 220G 207T | 37.2 | 0:11:06 | 1444 | 37686 |
| | | 242 | 1500 | 200C | 20.0 | 00+05+40 | 817 248 | 370 0 |
| | | 238 | 1497 | 212G 207T | 17.2 | 0:16:46 | 1195 | 37438 |
| | | 227 | 1500 | 200C | 7.8 | 00+02+09 | 723 94 | 370 0 |
| | | 222 | 1461 | 217G 207T | 9.4 | 0:18:55 | 1101 | 37343 |
| | | 258 | 1500 | 200C | 7.0 | 00+02+01 | 634 89 | 370 0 |
| | | 254 | 1500 | 207G 207T | 2.4 | 0:20:56 | 1012 | 37254 |
| | | 310 | 1500 | 200C | 2.4 | 00+00+46 | 600 34 | 370 0 |
| | | 305 | 1252 | 191G 207T | 0.0 | 0:21:42 | 979 | 37220 |

Fuel at time
of drogue strike

MV-22B NATOPS
Minimum Fuel

Estimated landing fuel
ROTM

DR 06 expected to land
379 lbs above NATOPS
minimum fuel

*220 lbs added for additional
crew member

*150 lbs added for kit weight

(b) (3)

**Memorandum for the Joint Committee
on
New Aircraft in Japan (MV-22)**

References:

- a. The Agreement Under Article VI of the Treaty of Mutual Cooperation and Security Between the United States of America and Japan Regarding Facilities and Areas and the Status of United States Armed Forces in Japan (SOFA)
- b. Statement on New Aircraft in Japan (MV-22)
 1. This memorandum, including reference b, confirms the safety of the MV-22 flight operations and addresses the basing and operations of the following new aircraft into Japan: MV-22.
 2. Reference b includes a description of the aircraft, its safety record, training of its aircrew and maintenance personnel, and flight patterns and operations over and surrounding US facilities and areas, and flight operations in training areas and other airspace.
 3. The Governments of the US and Japan will continue their close cooperation on issues of mutual interest, to include flight safety, noise abatement, and low-level flight training, through the Joint Committee and its various subcommittees.
 4. The Joint Committee agrees to release the contents of paragraphs 1, 2, and 3 of this memorandum and the contents of reference b to the public.
 5. The Governments of the US and Japan acknowledge that this memorandum is subject to reference a and without prejudice to the Treaty of Mutual Cooperation and Security Between the United States of America and Japan.

Approved by the Joint Committee on 19 September 2012.

(b) (3) 10 USC 130, (b) (3)

New Aircraft in Japan (MV-22)

1. **Overview:** The United States Marine Corps (USMC) will upgrade its aircraft fleet with MV-22 tiltrotor aircraft and remove CH-46 helicopters from service on a one-to-one basis at Marine Corps Air Station (MCAS) Futenma. This is part of the USMC process of replacing CH-46 helicopters worldwide with MV-22 tiltrotor aircraft. This is a unit-level upgrade, not a significant change of US presence in Japan. This upgrade also results in no significant change in the number of service members or their dependents in Okinawa.

2. **Aircraft Description:**

a. The MV-22 is a highly capable aircraft which combines the vertical capability of a helicopter with the speed and range of a fixed-wing aircraft. When compared to the CH-46, which was introduced in 1964, the MV-22 is roughly twice as fast, can carry nearly three times the payload, and has approximately four times the combat radius. Deployment of the more capable MV-22 aircraft in Okinawa has strategic significance, and it will further contribute to the security of Japan and the maintenance of international peace and security in the region.

b. Due to its high-capability and versatility, the MV-22 can also more effectively perform humanitarian assistance, disaster relief, and rescue operations in Japan and in the region. It is anticipated that the MV-22 will enable the USG to provide humanitarian assistance and disaster relief operations to local communities and the region. Wildland firefighting in the training areas to transport and dump water represents an important function with the MV-22 being able to transport as much as three times the amount of water that a CH-46 can transport. Furthermore, the MV-22 can operate from austere expeditionary sites to provide aid or rescue and can carry 20,000 pounds of cargo at a maximum cruising speed over 260 knots. For example, the MV-22's speed, range, and vertical landing ability enabled transportation of multiple units and relief supplies to remote locations in the disaster relief activities in Haiti in 2010. The MV-22 was also well-suited to safely fly from an amphibious ship in a remote location on the Mediterranean Sea to rescue one aviator from a downed F-15E aircraft in Libya.

c. Based on the MV-22's successful operational performance and record in the fields of disaster relief, humanitarian assistance, and rescue operations, the MV-22 will serve an important role in Japan and throughout the region.

(b) (3)

3. **Aircraft Safety Record:** Historical data gathered from the past 10 years of flying proves that the MV-22 has demonstrated a safety record that is consistently better than USMC averages.

a. The Government of the United States (USG) is committed to the safety of MV-22 flight operations. The USG reaffirms that the MV-22 will be operated in accordance with the Naval Air Training and Operating Procedures Standardization (NATOPS) flight manual for the MV-22, enhancing the safety of flight operations, and that the USMC will thoroughly educate and train its aircrew. The USG has well-established procedures for identifying mishap causes and taking appropriate preventative measures to prevent similar mishaps. These procedures include reviewing operations and training to determine whether modifications are required. The USG followed these procedures with the MV-22 mishap in Morocco and the CV-22 mishap in Florida, and the USMC took appropriate preventative measures following these procedures to make appropriate modifications to MV-22 operations and training.

b. The USG has presented to the Government of Japan (GOJ) investigation reports of the MV-22 mishap in Morocco on 11 April 2012 and the CV-22 mishap in Florida on 13 June 2012. The USG assures the GOJ that these investigations were conducted independently and objectively in accordance with relevant regulations and orders. The GOJ proactively reviewed the investigation reports and confirmed the safety of the aircraft. The GOJ was also provided unprecedented access to MV-22 information, and numerous flights and briefings were provided for GOJ officials. In addition, the USG and GOJ conducted extensive consultations in a variety of policy and operational-level venues.

c. The MV-22 has an outstanding safety record as a result of USMC efforts in aggressively documenting and, when appropriate, correcting or revising NATOPS procedures to prevent further mishaps.

4. **Training of MV-22 Aircrew and Maintenance Personnel:**

a. All MV-22 aircrew arriving in Japan will be proficient and possess required qualifications. To receive their required qualifications, aircrew must meet applicable training standards, including those required to respond in aircraft emergencies. To prevent aircraft mishaps, aircrew training includes applicable lessons learned from aircraft mishaps around the world. Because MV-22 aircraft commanders remain responsible for the safety of their aircraft, including the operations of the aircrew, they and other USMC officers in command will continue aircrew training in Japan to maintain their proficiency, increase their qualifications, and promote military readiness.

(b) (3)

b. All MV-22 aircrew arriving in Japan will be made familiar with operational requirements (i.e., "Course Rules") and any unique characteristics (e.g., topography, weather) before flying the MV-22 in Japan. MV-22 aircrew will also conduct thorough briefings to review standard operating procedures, aircrew coordination functions, and planned operating areas for each MV-22 flight.

c. All MV-22 maintenance personnel are thoroughly trained in accordance with applicable occupational specialty standards and will incorporate the latest maintenance information and practices to ensure the MV-22 will operate effectively and safely.

5. **Flight Patterns and Operations Over and Surrounding US Facilities and Areas:**

a. The USG intends to continue to comply with applicable Memoranda for the Joint Committee regarding Noise Abatement Countermeasures.

b. The USG establishes flight patterns over and surrounding US facilities and areas that minimize the impact of flight operations on the surrounding communities. For this purpose, entry and exit routes for flight operations of the MV-22 should be designed to avoid overflight of densely populated areas, including schools and hospitals as much as possible. While the MV-22 is safe to fly over land and water, the MV-22 will fly over water as much as practicable when transiting.

c. Both flight and ground operations between the hours of 2200 and 0600 are limited to those considered necessary for US operational requirements. Night training flights are limited to the minimum required to fulfill assigned US Forces Japan missions and maintain aircrew proficiency. Unit Commanders will exert every effort to complete night flying operations as early as practical. The USG will minimize the impact of MV-22 night training flights on the communities surrounding Futenma Air Station, including through the use of simulators.

d. The MV-22 will utilize both the established fixed wing and rotary wing traffic patterns and local operating procedures as the basis for arrival and departure of MCAS Futenma to ensure the safe flight operation.

e. The MV-22 normally flies the most time in airplane mode. Except as operationally necessary, MV-22s normally fly in vertical take-off and landing mode only within the boundary of US facilities and areas, and will limit the period of conversion mode as much as possible.

(b) (3)

f. After the deployment of the MV-22 in Okinawa, as part of existing programs and with the assistance of the GOJ, the two Governments intend to consider the possibility of conducting its flight training in Japan other than in Okinawa.

6. **MV-22 Flight Operations in Training Areas and Other Airspace:**

a. As part of flight operations, to include low-level flights, MV-22 aircrew routinely report obstacles or hazards in the training areas and along training navigation routes. Additionally, aircrew will continuously report the changes to scheduling authorities for dissemination and incorporation into flight planning charts.

b. During flight operations, MV-22 aircrew regularly review and evaluate training navigation routes to ensure maximum safety. Accordingly, the locations of these routes may be modified over time to ensure safety and to minimize the impact on residents of Japan.

c. The USG will conduct its MV-22 flight operations with due regard for the public safety.

d. The USG routinely limits low-level flight training on weekends and Japanese holidays to what it considers essential for US operational readiness requirements.

e. MV-22 aircrew will conduct low-level flight training in Japan because the MV-22 will occasionally operate at low altitudes. While using training navigation routes, the MV-22 will fly at or above 500 feet above ground level, although operational safety may require flying below that altitude. During low-level flight training, it is standard practice for USG aircraft to avoid overflying such places as atomic energy facilities, historic sites, civil airports, congested areas, and other buildings related to public safety (e.g., schools and hospitals).

DD Form 1801, MAY 87 (COMPUTER GENERATED) DOD INTERNATIONAL FLIGHT PLAN

Enclosure 41

Recovered Voice and Data Recorder; Model K Flight Data for DN06

48 pages

Withheld in accordance with FOIA Exemption (b)(1); mosaic approach

(b)(6) (b)(3) 10 U.S.
Code § 130b

From: (b)(6) (b)(3) 10 U.S. Code
Sent: Sunday, December 18, 2016 10:47 AM
To: (b)(6) (b)(3) 10
Subject: Weather Observations

Good morning sir,

Here are the weather observations available from Futenma to Amami. Please let me know if you have any questions.

MCAS Futenma

ROTM 131305Z 32016G20KT 9999 SCT030 21/16 A2993 RMK SLP122 XWND ADV ROTM 131258Z COR 32012G20KT 9999
SCT030 21/17 A2992 RMK SLP118 XWND ADV T02110167 ROTM 131158Z COR 32017G22KT 9999 SCT025 21/17 A2990
RMK SLP112 XWND ADV 70030 T02110161 10228 20211 52007 ROTM 131058Z COR 32014KT 9999 SCT025 21/17 A2989
RMK SLP108 XWND ADV T02110172 ROTM 130958Z COR 31016G22KT 9999 SCT020 21/17 A2988 RMK SLP105 XWND
ADV T02110172 ROTM 130858Z 31014G19KT 9999 SCT020 21/17 A2985 RMK SLP0958 XWND ADV T02170178 54000
ROTM 130758Z COR 30016G21KT 9999 SCT020 23/19 A2985 RMK SLP095 XWND ADV SET T02280189

Kadena AFB

RODN 131346Z AUTO 33012KT 10SM BKN030 BKN041 22/17 A2993 RMK AO2 RAB37E46 RODN 131337Z AUTO 33010KT
10SM -RA BKN030 BKN041 22/17 A2993 RMK AO2 RAB37 RODN 131258Z AUTO 33009KT 10SM SCT029 SCT038 22/17
A2991 RMK AO2 SLP135 T02160170 RODN 131217Z AUTO 32013KT 10SM SCT028 21/17 A2989 RMK AO2 RODN
131209Z AUTO 33011KT 10SM BKN028 22/17 A2989 RMK AO2 BKN V SCT RODN 131158Z AUTO 33010KT 10SM SCT028
22/17 A2990 RMK AO2 SLP131 T02160171 10251 20216 52017 RODN 131058Z AUTO 31012KT 10SM SCT026 22/18
A2988 RMK AO2 SLP124 T02200182 RODN 131010Z AUTO 30013KT 10SM SCT025 22/19 A2987 RMK AO2 RODN
130958Z AUTO 31010KT 10SM BKN025 22/19 A2987 RMK AO2 SLP121 T02200187 RODN 130947Z AUTO 30013KT 10SM
BKN024 22/19 A2986 RMK AO2 BKN V SCT RODN 130858Z AUTO 30013KT 10SM FEW025 22/19 A2985 RMK AO2 SLP114
T02220189 53006 RODN 130811Z AUTO 29014KT 10SM SCT024 23/19 A2983 RMK AO2 RODN 130805Z AUTO 30013KT
10SM BKN024 23/19 A2984 RMK AO2 BKN V FEW RODN 130758Z AUTO 30010KT 10SM FEW024 23/19 A2984 RMK AO2
SLP111 T02330192

Amami

RJKA 132200Z 30012KT 270V340 9999 FEW030 SCT050 20/13 Q1013 RJKA 132130Z 31014G25KT 270V350 9999 FEW030
SCT050 19/12 Q1012 RJKA 131000Z 28011KT 9999 FEW015 22/17 Q1008 RJKA 130900Z 27009KT 250V310 9999 FEW015
23/18 Q1007 RJKA 130800Z 23011KT 9999 FEW015 23/19 Q1007

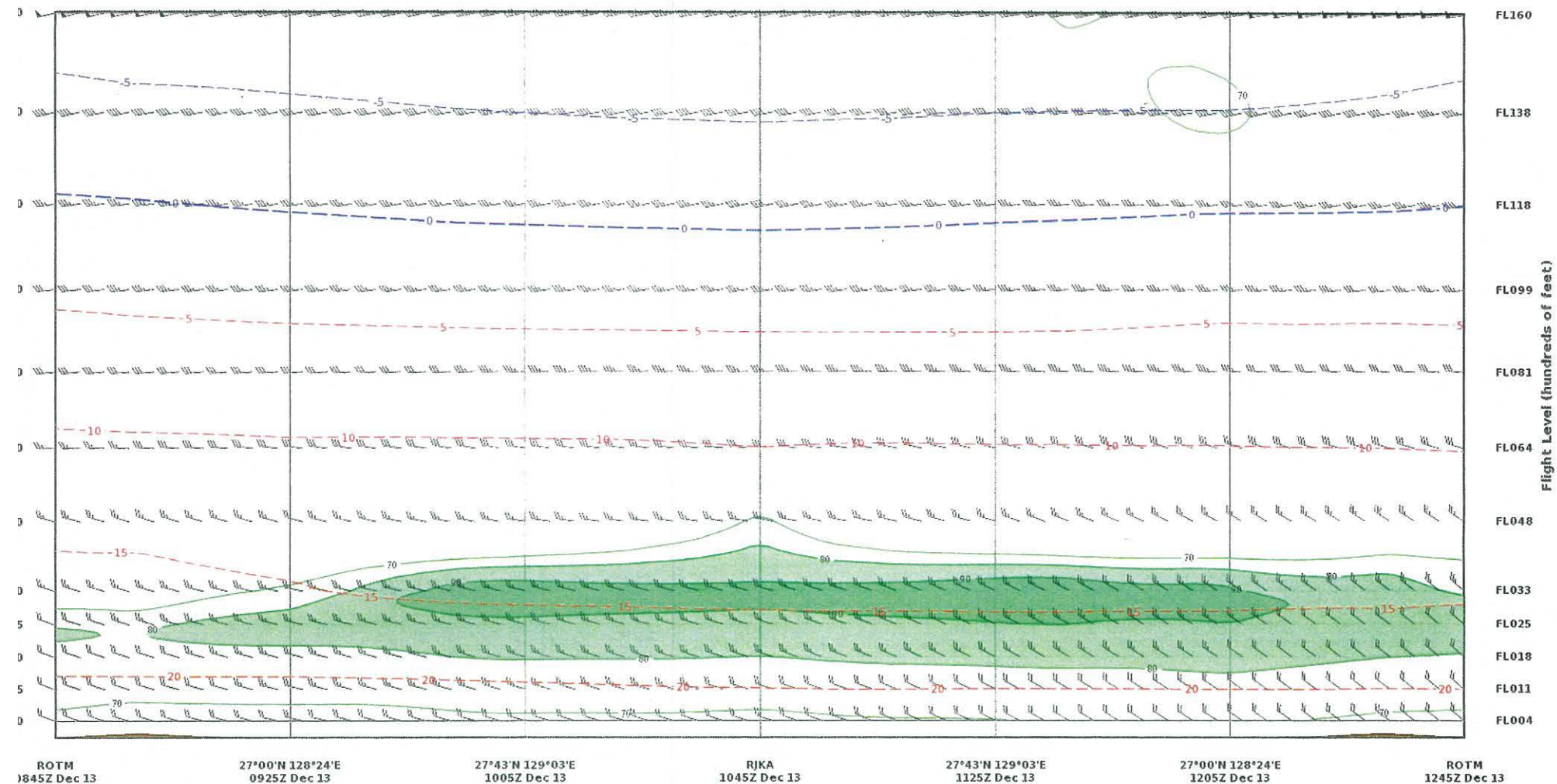
(b)(6) (b)(3) 10
U.S. Code § 130b

OBSERVATIONS / TAFS ALT

DTM 130658Z 30013KT 9999 SCT020 23/19 A2985 RMK SLP094 T02280183
DTM 130558Z 29013KT 9999 SCT020 BKN120 24/21 A2985 RMK SLP090 60003 T02390206 10239 20217 57010
DTM 130458Z 29011KT 9999 SCT020 BKN120 24/20 A2986 RMK SLP098 T02390210
DTM 130358Z 27008KT 9999 SCT020 BKN120 24/21 A2988 RMK SLP102 T02390211
DTM 130258Z 28006KT 9999 SCT090 BKN110 24/21 A2993 RMK SLP116 60003 T02390211 50003
DTM 130158Z 25007KT 9999 SCT090 BKN110 23/21 A2995 RMK SHRAE10 SLP126 P0001 T02280211

F ROTM 1303/1403 28012KT 9999 SCT090 BKN110 QNH2985INS
EMPO 1311/1317 31016KT
ECMG 1317/1319 35017G21KT 9999 SCT030 BKN050 QNH2992INS
EMPO 1321/1403 8000 -SHRA BR T24/1305Z T20/1319Z

KA 130700Z 22015KT 9999 FEW015 24/20 Q1007
KA 130600Z 22016KT 9999 FEW010 BKN150 24/19 Q1008
KA 130500Z 21014KT 9999 FEW020 SCT080 BKN150 23/20 Q1008
KA 130400Z 22017KT 9999 FEW015 BKN080 BKN150 22/20 Q1010
KA 130300Z 23017KT 9999 -SHRA FEW010 SCT020 BKN050 21/19 Q1011
KA 130200Z 25012KT 5000 -SHRA BR FEW010 FEW025CB SCT035 BKN060 20/19 Q1013



Temperature (+/-°C) Flight Level Winds (kts)*

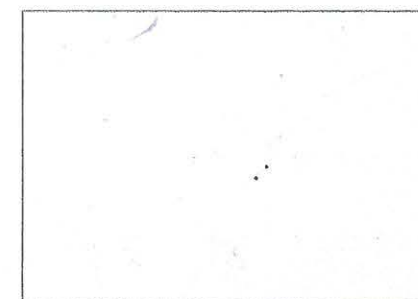
Relative Humidity (>70%) Clouds (FEW or Greater)

Light Icing / Moderate Icing / Severe Icing

Moderate Turbulence (Hatched) / Severe Turbulence (Hatched)

*NOTE: Wind direction is relative to a compass (barbs to left indicate westerly wind), not relative to route of flight.

Start point is always on left side of cross-section, endpoint on right-hand side. Model terrain is drawn per route of flight.



DRAGON05
Cross Section



UNITED STATES MARINE CORPS

1ST MARINE AIRCRAFT WING

UNIT 37101

FPO AP 96373-7101

IN REPLY REFER TO:

5830

CG

From: (b)(6) (b)(3) 10 U.S. Code § 130b

To: Commanding General, 1st Marine Aircraft Wing

Subj: REQUEST FOR EXTENSION ICO 13 DECEMBER 2016 MV-22B MISHAP
COMMAND INVESTIGATION

Ref: (a) CG 1st MAW ltr 5800 CG of 15 Feb 17

1. I request an extension of 30 days to submit this investigation in order to complete appropriate review of the materials gathered. I request a new submission date of 30 April 2017.

(b)(6) (b)(3) 10 U.S. Code § 130b

Copy to:
SJA, 1st MAW



UNITED STATES MARINE CORPS
MARINE AIRCRAFT GROUP 36
UNIT 37131
FPO AP 96372-7131

IN REPLY REFER TO:

5420

(b)(6)

(b)(3)
26 Jan 17

From: (b)(6) (b)(3) 10 U.S. Code § 130b USMC
To: (b)(2), (b)(6) b (3) 10 USC 130b

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF
(b)(6) (b)(3) 10 U.S. Code § 130b

Ref: (a) MCO P1000.6G

1. Flight Hour Summary

- a. Total Flight Hours: 242.8
- b. Total Hours Last Three Months: 60.5
- c. Total TMS (Type/Model/Series) Hours: 242.8

2. Fleet Replacement Squadron Performance

a. Marine Medium Tiltrotor Training Squadron 204

(1) Phase Individual Grade Squadron Average Rank

- (a) Familiarization: -0.4
- (b) Instrument: 0.00
- (c) Confined Area Landings: 1.0
- (d) Formation: 0.8
- (e) Night System: -0.1
- (f) Low Altitude Tactics: -0.4
- (g) Cargo: 0.5
- (h) Review: -1.0
- (i) Overall Deviation: -0.18

(2) Number of Unsatisfactory/Marginal Events: None.

(3) Remarks: No major discrepancies noted.

ENCLOSURE (3)

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF
(b)(6) (b)(3) 10 U.S. Code § 130b

3. Squadron Performance

a. Marine Medium Tiltrotor Squadron 265

(1) Specific Qualifications

(a) Crew Chief: 16 Feb 16

(b) Night System Qualified (Low Light): 20 Jun 16

(2) Syllabus Grades: N/A

(b) (6) b (3) 10 USC 130b, (b) (2)

(b)(6) (b)(3) 10 U.S.
Code § 130b



UNITED STATES MARINE CORPS
MARINE AIRCRAFT GROUP 36
UNIT 37131
FPO AP 96372-7131

IN REPLY REFER TO:

5420

(b)(6)

(b)(3)

20 Jan 17

From: (b)(6) (b)(3) 10 U.S. Code § 130b

To: (b)(2), (b)(6) b (3) 10 USC 130b

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF (b)(6) (b)(3)
(b)(6) (b)(3) 10 U.S. Code § 130b

Ref: (a) MCO P1000.6G

1. Flight Hour Summary

- a. Total Flight Hours: 1,012.9
- b. Total Hours Last Three Months: 65.7
- c. Total TMS (Type/Model/Series) Hours: 803.2

2. Training Command Performance

a. Training Squadron 3 (VT-3) (Primary)

- (1) Individual Flight Grade: Navy Standard Score (NSS) 53.2
- (2) Squadron Average Flight Grade: NSS 50.0
- (3) Number of Unsatisfactory/Marginal Events: None.
- (4) Remarks: No major discrepancies noted.

b. Helicopter Training Squadron 8 (Intermediate)

- (1) Individual Flight Grade: NSS 52.3
- (2) Squadron Average Flight Grade: 50.0
- (3) Number of Unsatisfactory/Marginal Events: None.
- (4) Remarks: No major discrepancies noted.

c. VT-35 (Advanced)

- (1) Individual Flight Grade: NSS 57.25
- (2) Squadron Average Flight Grade: NSS 50.0

ENCLOSURE (3)

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF (b)(6) (b)(3)
(b)(6) (b)(3) 10 U.S. Code § 130b 10 U.S.

(3) Number of Unsatisfactory/Marginal Events: None.

(4) Remarks: No major discrepancies noted.

3. Fleet Replacement Squadron Performance

a. Marine Medium Tiltrotor Training Squadron 204

(1) Phase Individual Grade Squadron Average Rank

(a) Familiarization: -0.07

(b) Instrument: 0.0

(c) Formation: 0.914

(d) Night System: 0.918

(f) Navigation: 0.2

(g) Confined Area Landings: 0.792

(g) Low Altitude Tactics: 0.4043

(h) Review : 0.533

(i) Overall Deviation: 0.225

(2) Number of Unsatisfactory/Marginal Events: None.

(3) Remarks: No major discrepancies noted.

4. Squadron Performance

a. Marine Medium Tiltrotor Squadron 365 (VMM-365)

(1) Specific Qualifications

(a) Functional Check Pilot: 23 Jul 15

(b) Basic Instructor Pilot: 31 Oct 14

(c) Section Leader Leader: 12 Mar 15

(d) Low Altitude Tactics Instructor: 4 Jun 15

(2) Syllabus Grades

(a) ACAD-2410: N/A

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF

(b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3)
10 U.S.

(b) SAAR-2430: 3.11

(c) AAR-2431: 3.00

(d) SAAR-2432: 3.25

(e) AAR-2433: 3.62

(b) (6) b (3) 10 USC 130b, (b) (2)

b. VMM-265

(1) Specific Qualifications

(a) Functional Check Pilot: 23 Jul 15

(b) Division Leader: 8 Jun 16

(c) NATOPS Instrument Evaluator: 13 Jun 16

(d) Crew Resource Management Facilitator: 14 Jun 16

(e) Crew Resource Management Instructor: 15 Jun 16

(f) Crew Resource Management Unit Level Manager: 15 Jun 16

(g) Night System Instructor: 5 Aug 16

(h) Air to Air Refueling Instructor: 18 Oct 16

(2) Syllabus Grades

(a) ACAD-5310: N/A

(b) SAAR-5330: 3.78

(c) AAR-5331: 4.00

(b) (2), (b) (6) b (3) 10 USC 130b

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF (b)(6) (b)(3)
(b)(6) (b)(3) 10 U.S. Code § 130b 10 U.S.
(b)(6) (b)(3) 10 U.S.
Code § 130b



UNITED STATES MARINE CORPS
MARINE AIRCRAFT GROUP 36
UNIT 37131
FPO AP 96372-7131

IN REPLY REFER TO:
5420
BJS
26 Jan 17

From: (b)(6) (b)(3) 10 U.S. Code § 130b

To: (b) (2), (b) (6) b (3) 10 USC 130b

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF (b)(6) (b)(3)
(b)(6) (b)(3) 10 U.S. Code § 130b

Ref: (a) MCO P1000.6G

1. Flight Hour Summary

- a. Total Flight Hours: 525.3
- b. Total Hours Last Three Months: 46.1
- c. Total T/M/S (Type/Model/Series) Hours: 290.9

2. Training Command Performance

a. Training Squadron 28 (VT-28) (Primary)

- (1) Individual Flight Grade: Navy Standard Score (NSS) 53.2
- (2) Squadron Average Flight Grade: NSS 50.0
- (3) Number of Unsatisfactory/Marginal Events: One.
- (4) Remarks: Marginal on Instrument 4104 (I4104) for basic air work (BAW).

b. Helicopter Training Squadron 8 (Intermediate)

- (1) Individual Flight Grade: NSS 52.3
- (2) Squadron Average Flight Grade: 50.0
- (3) Number of Unsatisfactory Events: One.
- (4) Remarks: Failed one academic exam.

c. VT-35 (Advanced)

- (1) Individual Flight Grade: NSS 57.25
- (2) Squadron Average Flight Grade: NSS 50.0

ENCLOSURE (3)

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF (b)(6) (b)(3)
(b)(6) (b)(3) 10 U.S. Code § 130b 10 U.S

(3) Number of Unsatisfactory/Marginal Events: Four.

(b) (2), (b) (6) b (3) 10 USC 130b

3. Fleet Replacement Squadron Performance

a. Marine Medium Tiltrotor Training Squadron 204

(1) Phase Individual Grade Squadron Average Rank

(a) Familiarization: 0.071

(b) Instrument: 0.257

(c) Formation: 0.4

(d) Night System: 0.65

(f) Navigation: 0.433

(g) Confined Area Landings: 0.1

(g) Low Altitude Tactics: 0.25

(h) Review : 0.633

(i) Overall Deviation: 0.258

(2) Number of Unsatisfactory/Marginal Events: One.

(3) Remarks: SFAM-1035 failed due to inability to conduct no hover landings.

4. Squadron Performance

a. Marine Medium Tiltrotor Squadron 265

(1) Specific Qualifications

Night System Qualified (Low Light): 8 Jun 16

(2) Syllabus Grades

(a) ACAD-2410: N/A

(b) SAAR-2430: 3.00

(c) AAR-2431: 2.68

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF (b)(6) (b)(3)
(b)(6) (b)(3) 10 U.S. Code § 130b 10 U S

(d) SAAR-2432: 3.00

(e) AAR-2433: 2.88

(b) (2), (b) (6) b (3) 10 USC 130b

(b)(6) (b)(3) 10 U.S. Code
§ 130b



UNITED STATES MARINE CORPS

MARINE AIRCRAFT GROUP 36

UNIT 37131

FPO AP 96372-7131

IN REPLY REFER TO:

5420

BJS

26 Jan 17

From: (b)(6) (b)(3) 10 U.S. Code § 130b

To: (b) (2), (b) (6) b (3) 10 USC 130b

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF
(b)(6) (b)(3) 10 U.S. Code § 130b

Ref: (a) MCO P1000.6G

1. Flight Hour Summary

- a. Total Flight Hours: 381.7
- b. Total Hours Last Three Months: 86.6
- c. Total TMS (Type/Model/Series) Hours: 381.7

2. Fleet Replacement Squadron Performance

a. Marine Medium Tiltrotor Training Squadron 204

(1) Phase Individual Grade Squadron Average Rank

- (a) Familiarization: -0.4
- (b) Instrument: 0.8
- (c) Confined Area Landings: 0.7
- (d) Formation: 0.7
- (e) Night System: -0.17
- (f) Low Altitude Tactics: -0.8
- (g) Cargo: 0.0
- (h) Review: -1.0
- (i) Overall Deviation: -0.28

(2) Number of Unsatisfactory/Marginal Events: None.

(3) Remarks: No major discrepancies noted.

ENCLOSURE (3)

Subj: AVIATION BACKGROUND REVIEW SUMMARY IN THE CASE OF
(b)(6) (b)(3) 10 U.S. Code § 130b

3. Squadron Performance

a. Marine Medium Tiltrotor Squadron 265

(1) Specific Qualifications

(a) Crew Chief: 21 Nov 14

(b) Night System Qualified (Low Light): 4 May 16

(c) Basic Instructor Crew Chief: 21 Nov 16

(2) Syllabus Grades: N/A

(b) (2), (b) (6) b (3) 10 USC 130b

(b)(6) (b)(3) 10
U.S. Code § 130b



VMM-365

AVIATION TRAINING FORM



INSTRUCTOR

(b)(6) (b)(3) 10

NAME

(b)(6) (b)

DATE

06-Feb-2013

DEVICE

Classroom

FLIGHT TIME

0.0

AIRCRAFT ID

0

T/M/S

MV-22

T&R CODES (AS REQ)

ACAD-2410

GEOGRAPHIC INFO

| ITEM | | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|-------|---|---|---|---|---|---|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | Flight Narrative: |
| 3 | EMERGENCY PROCEDURES | | | | | | | | ACAD COMPLETE IN ACCORDANCE WITH THE T&R. |
| 4 | PREVIOUS STAGE DND | | | | | | | | |

Strengths:

N/A

Areas for Improvement:

N/A

Instructor/Operations Information:

ACAD COMPLETE IN ACCORDANCE WITH THE T&R.

| GRADE | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
|-------|--|---|----------|
|-------|--|---|----------|

INSTRUCTOR SIGN

STUDENT SIGN

NEXT IP REVIEW

DIV HEAD REVIEW

(b)(6) (b)



VMM-365

AVIATION TRAINING FORM



INSTRUCTOR

DATE

FLIGHT TIME

T/M/S

FLIGHT POSITION

(b)(6) (b)(3)
10 U.S. Code § 130b

0.0

MV-22

NAME

DEVICE

AIRCRAFT ID

T&R CODES (AS REQ)

GEOGRAPHIC INFO

(b)(6) (b)
MV-22 6 (CFTD)

SAAR-2430

| ITEM | | END | UNSAT | 2 | 3 | 4 | 5 | REMARKS |
|------|--|-----|-------|---|---|---|---|--|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | Instructor Comments |
| a | Briefing | | | | X | | | Flight Narrative: |
| b | Basic Airwork | | | | | X | | Overall a good Sim event for (b)(6) (b) came to the brief well prepared and ready to discuss. All T&R items were discussed in detail. Event was conducted in the local CLJ complex, and the W-122. All introduced items were flown and debriefed. Basic comprehension of maneuvers was accomplished. Remember the Sim is a procedure trainer; use it to develop solid habit patterns. Do not fly the Sim differently than the airplane. Acknowledge the sight picture limitations of the training device, and do not waste effort trying to "game" the system. |
| c | Ready work | | | | X | | | Strengths: |
| d | Demonstrate/Introduce Introduce basic scan and flight techniques required to refuel from the KC-430. | | | | X | | | Solid basic airwork |
| e | Demonstrate/Introduce Rendezvous (minimum of 2 for initial events). | | | | X | | | Areas for Improvement: |
| f | Demonstrate/Introduce Join-up. | | | | X | | | Remember the basics of formation flying |
| g | Demonstrate/Introduce Contact/fuel transfer. | | | | X | | | Instructor/Operations Information: |
| h | Demonstrate/Introduce Post AAR procedures. | | | | X | | | N/A |
| i | Demonstrate/Introduce Emergency breakaway. | | | | X | | | |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | |
| 3 | PERFORMANCE EVALUATION - INCOMPLETE ITEMS | | | | | | | |

(b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code § 130b

11 ☒ Satisfactory ☐ Unsatisfactory COMPLETE

NEXT IF REVIEW

DIV HEAD REVIEW

(b)(6) (b)
(3) 10 U.S.



VMM-365

AVIATION TRAINING FORM



INSTRUCTOR

DATE

FLIGHT TIME

T/M/S

FLIGHT POSITION

(b)(6) (b)(3)

20-Feb-2013

2.0

MV-22

NAME

DEVICE

AIRCRAFT ID

T&R CODES (AS REQ)

GEOGRAPHIC INFO

(b)(6) (b)(3)

Aircraft

06 (166735)

AAR-2431

W-122 area

| ITEM | | END | ENST | 1 | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|------|---|---|---|---|---|---|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments |
| a | Briefing | | | | | X | | | Flight Narrative: |
| b | Basic Airwork | | | | | X | | | Flight was flown as dash 3 in a division in the W-122 area. (b) |
| c | Headwork | | | | | X | | | (b) was the 2nd copilot following an in-air hotseat. Introduced a |
| d | Introduce Rendezvous | | | | | X | | | rendezvous and join-up before conducting multiple plugs both dry |
| e | Introduce Join-up | | | | | X | | | and wet on left and right sides of the tanker. |
| f | Introduce Contact/fuel transfer (minimum of 5 for initial events) | | | | | X | | | Strengths: |
| g | Introduce Post AR procedures | | | | | X | | | Knowledge |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | Areas for Improvement: |
| a | Introduce Emergency breakaway | X | | | | | | | BAW. Remember to make small control inputs in and around the |
| 3 | PERFORMANCE EVALUATION - INCOMPLETE ITEMS | | | | | | | | tanker and to "fly the T." |

Instructor/Operations Information:

N/A

(b)(6) (b)(3) 10 U.S.
Code § 130b

(b)(6) (b)(3) 10 U.S. Code
§ 130b

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☒ Satisfactory

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COMPLETE

NEXT IF REVIEW

DIV HEAD REVIEW

(b)(6) (b)(3)



VMM-365

AVIATION TRAINING FORM



INSTRUCTOR

DATE

FLIGHT TIME

T/M/S

FLIGHT POSITION

(b)(6) (b)(3) 10

06-Feb-2013

0.0

MV-22

NAME

DEVICE

AIRCRAFT ID

T&R CODES (AS REQ)

GEOGRAPHIC INFO

(b)(6) (b)(3)

NAVJCS(CFTD)

SAAR-2432

| ITEM | | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|-------|---|---|---|---|---|--|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments |
| a | Briefing | | | | | X | | | Flight Narrative: |
| b | Basic Airwork | | | | | | X | | Overall a good Sim event for (b)(6) (b)(3) came to the brief well prepared and ready to discuss (b)(6) (b)(3) items were discussed in detail. Event was conducted in the local CLJ complex, and the W-122. All introduced items were flown and debriefed. Basic comprehension of maneuvers was accomplished. Remember the Sim is a procedure trainer; use it to develop solid habit patterns. Do not fly the Sim differently than the airplane. Acknowledge the sight picture limitations of the training device, and do not waste effort trying to "game" the system. |
| c | Headwork | | | | | X | | | Strengths: |
| d | Demonstrate/introduce NVD AAR | | | | | X | | | Solid basic airwork |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | Areas for Improvement: |
| 3 | PERFORMANCE EVALUATION - INCOMPLETE ITEMS | | | | | | | | Remember the basics of formation flying |

(b)(6) (b)(3) 10 U.S.
Code § 130b

(b)(6) (b)(3) 10 U.S.
Code § 130b

3.25

☒ Satisfactory

☐ Unsatisfactory

COMPLETE

NEXT IP REVIEW

DTY HEAD REVIEW

(b)(6) (b)(3)
10 U.S.



VMM-365

AVIATION TRAINING FORM



INSTRUCTOR
DATE
FLIGHT TIME
T/M/S
FLIGHT POSITION

(b)(6) (b)

05-Jul-2013

1.0

MV-22

NAME

(b)(6) (b)

DEVICE

Aircraft

AIRCRAFT ID

02 (166718)

T&R CODES (AS REQ)

AAR-2433

GEOGRAPHIC INFO

NAS Sigonella / NSA Souda Bay

| ITEM | | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|-------|---|---|---|---|---|---|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments Flight Narrative: Overview: Flight conducted in conjunction with Out-and-In Mission Rehearsal exercise to/from NSA Souda Bay from NAS Sigonella. Wx: VMC/CAVU, LLL. Plan: After Shutdown at NSA Souda Bay, plan was to depart Souda Bay as a mixed-section (1 x MV-22, 1 x KC-130) with a running RV on departure. Conduct initial AAR en route. Upon entering the Malta FIR, flight conducted multiple Break-up & RVs. (b)(6) was to hotseat in after first student and conduct NS AAR and multiple B&Rs, upon completion (b) was to hotseat out. Brief: Combined MV-22/KC-130 MRX flight brief conducted by MV-22 & KC-130 flight leaders; T&R brief covered all applicable briefing items - good brief. Execution: Flight conducted as planned with minor deviations. (b)(6) hotseated in as the third student after over 4 hours of flight as a pax. Conducted tanker flow and multiple dry plugs from both L & R sides. Good overall aircraft control and trim. Good SA. Light show conducted with KC-130 to include overt & covert lighting schemes. Upon returning to local Sigonella airspace, (b)(6) coordinated a flight break-up for SS approaches to NAS Sigonella. Strengths: Good tanker flow, aircraft control, and SA. Areas for Improvement: During flight break-ups, be very clear with what you want each aircraft to do and how you want approach control to handle each - especially in foreign airspace with foreign controllers. Instructor/Operations Information: N/A |
| a | Headwork | | | | | X | | | |
| b | Briefing | | | | | | X | | |
| c | Basic Airwork | | | | | X | | | |
| d | Introduce Rendezvous (minimum of 2). | | | | | X | | | |
| e | Introduce Tanker flow. | | | | | | X | | |
| f | Introduce Contact/fuel transfer. | | | | | | X | | |
| g | Introduce Post AAR procedures. | | | | | | X | | |
| h | Introduce EMCON tanker procedures (EMCON condition 3 or 4). | | | | | | X | | |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | |
| a | Introduce Emergency breakaway. | X | | | | | | | |
| 3 | PERFORMANCE EVALUATION - INCOMPLETE ITEMS | | | | | | | | |

(b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code § 130b

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✓ Satisfactory

Unsatisfactory

COMPLETE

NEXT IP REVIEW

DIV HEAD REVIEW

(b)(6) (b)
(3) 10



VMM-265

AVIATION TRAINING FORM



INSTRUCTOR (b)(6) (b)
DATE 27-Jan-2016
FLIGHT TIME 0.0
T/M/S MV-22

NAME (b)(6) (b)
DEVICE MV-22 8 (CFTD) OK
AIRCRAFT ID 0
T&R CODES (AS REQ) ACAD-5310
GEOGRAPHIC INFO

| ITEM | IND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|---|-----|-------|---|---|---|---|---|--|
| 1 PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments |
| 2 PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | Flight Narrative: |
| 3 EMERGENCY PROCEDURES | | | | | | | | (b)(6) (b) provided this period of instruction while embarked on the 31st MEU to a full ready room. Presence was adequate but confidence was not at its fullest. Work on your level of understanding of the material and ensure adequate time for a practice run before providing a period of instruction. You know the terminology and the procedures, work on conveying those thoughts in a more concise manner. |
| 4 PREVIOUS STAGE DND | | | | | | | | Strengths: N/A Areas for Improvement: N/A Instructor/Operations Information: (b)(6) (b) completed the period of instruction as prescribed in the Training in Readiness manual. |

| | | | |
|-------|--|---|----------|
| GRADE | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
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INSTRUCTOR SIGN

STUDENT SIGN

NEXT IP REVIEW

DIV HEAD REVIEW



VMM-265

AVIATION TRAINING FORM



INSTRUCTOR

DATE

FLIGHT TIME

T/M/S

(b)(6) (b)

(3) Jan 2016

2.0

MV-22

NAME

DEVICE

AIRCRAFT ID

T&R CODES (AS REQ)

GEOGRAPHIC INFO

(b)(6) (b)

MV-22 8 (CFTD) OK

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SAARI-5330

| ITEM | DND | UNSAT | 2 | 3 | 4 | 5 | REMARKS |
|--|-----|-------|---|---|---|---|---|
| 1 PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | Instructor Comments |
| a Briefing | | | | X | | | Flight Narrative: |
| b Basic Airwork | | | | X | | | The event planned and briefed to conduct day and NS AAR in the vicinity of MCAS Futenma in order to allow (b)(6) (b) to instruct portions of both day and night tanking evolutions. The event executed as briefed with focus on instructional technique, completing required T&R requirements, aerial refueling emergencies, and squadron standard operating procedure. |
| c Headwork | | | | | X | | Strengths: |
| d Review Basic scan and flight techniques required to refuel from the tanker. | | | | | X | | (b)(6) (b) demonstrated a solid understanding of AAR technique and procedure. |
| e Review Rendezvous. | | | | | X | | Areas for Improvement: |
| f Review Join-up. | | | | | X | | Work on improving your training timeline to account for simulator setup and the amount of difficulty most students experience when attempting AAR in the simulator. |
| g Review Contact/fuel transfer (minimum of 3 day, 3 night unaided, and 3 NVD plugs). | | | | | X | | Instructor/Operations Information: |
| h Review Post AAR procedures. | | | | | X | | N/A |
| i Review Emergency breakaway. | | | | | X | | |
| 2 PERFORMANCE EVALUATION - ITEMS DND | | | | | | | |
| 3 EMERGENCY PROCEDURES | | | | | | | |
| 4 PREVIOUS STAGE DNDs | | | | | | | |

| | | | | |
|-------|------|--|---|----------|
| GRADE | 3.75 | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
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INSTRUCTOR SIGN

STUDENT SIGN

NEXT IF REVIEW

DMV HEAD REVIEW



VMM-265

AVIATION TRAINING FORM



INSTRUCTOR (b)(6) (b)(3)
DATE 18-Oct-2016
FLIGHT TIME 1.0
T/M/S MV-22

NAME (b)(6) (b)(3)
DEVICE Aircraft
AIRCRAFT ID 10 (168216)
T&R CODES (AS REQ) AARI-5331
GEOGRAPHIC INFO

| ITEM | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|--|-----|-------|---|---|---|---|---|---|
| 1 PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments |
| a Briefing | | | | | | X | | Flight Narrative: |
| Reasons: Mission Planning-Instructor Skill/Technique: (b)(6) (b)(3) provided a brief to the crew which was full of detail, both in technique and personal experience. | | | | | | | | The event planned and briefed to conduct NS AAR in the vicinity of Okinawa with VMGR-152 in order to create three new Air to Air Refueling Instructors and increase squadron proficiency. The environmentals would consist of a HLL night with few to scattered clouds in the tanker track area. The event planned to use a track to the north and west of the W-174 training area. Sumo was already dedicated to provide fuel for multiple fixed wing conducting close air support to ground elements training on Idesuna Jima. The event also conducted approximately one hour of LLL section confined area landings on Je Shima before proceeding to join with the tanker. The event joined with Sumo via a Hotel rendezvous at the appropriate time and conducted multiple dry and wet refueling evolutions. At the completion of training, the section departed from the track low and to the east. As the section began a descent to leave the tanker track, the section leader checked in with the appropriate ground combat element FAC to request clearance through the W-174 to return to Futenma. The FAC requested the section to proceed to Idesuna Jima to pick up a passenger for return to Futenma. The section leader decided to separate the flight with the dash two aircraft proceeding directly back to Futenma while the lead aircraft made the troop pick up. At the completion of the troop pick up, the lead aircraft proceeded to Futenma for a full stop and subsequent shutdown. All initial sorties were completed as scheduled. |
| b Basic Airwork | | | | | | X | | Strengths: |
| Reasons: PF Skill-Aircraft Trim: (b)(6) (b)(3) demonstrated a superb mastery of the aircraft control required around the tanker to demonstrate maneuvers to pilots under instruction. | | | | | | | | Mission Planning: Instructor Skill/Technique: (b)(6) (b)(3) provided a brief to the crew which was full of detail, both in technique and personal experience. PF Skill: Aircraft Trim: (b)(6) (b)(3) demonstrated a superb mastery of the aircraft control required around the tanker to demonstrate maneuvers to pilots under instruction. PF Skill: Scan: (b)(6) (b)(3) demonstrated a high degree of situational awareness and a keen ability to demonstrate and verbally instruct while at the controls of the aircraft. |
| c Headwork | | | | | | X | | Areas for Improvement: |
| d Review Scan and flight techniques required to refuel from the tanker using NVDs | | | | | | X | | OTHER: OTHER: Ensure you continue to refine your plan to include allowing your student to work through the post AAR procedures checklist. You want to afford the student every opportunity to see each aspect aerial refueling operations during the initial day and night sortie. |
| Reasons: PF Skill-Scan: (b)(6) (b)(3) demonstrated a high degree of situational awareness and a keen ability to demonstrate and verbally instruct while at the controls of the aircraft. | | | | | | | | OTHER: OTHER: Ensure you continue to refine your plan to include allowing your student to work through the post AAR procedures checklist. You want to afford the student every opportunity to see each aspect aerial refueling operations during the initial day and night sortie. |
| e Review Rendezvous | | | | | | X | | Instructor/Operations Information: |
| f Review Join-up | | | | | | X | | N/A |
| g Review Contact/fuel transfer (minimum of 5 contacts) | | | | | | X | | |
| h Review Post AAR procedures | | | | | | X | | |
| Reasons: OTHER-OTHER / Ensure you continue to refine your plan to include allowing your student to work through the post AAR procedures checklist. You want to afford the student every opportunity to see each aspect aerial refueling operations during the initial day and night sortie. | | | | | | | | |
| i Review EMCON refueling | | | | | | X | | |
| Reasons: Mission Planning-Instructor Skill/Technique / Ensure you continue to refine your plan to include allowing your student to see and work through the EMCON operations around the tanker. You want to afford the student every opportunity to see each aspect aerial refueling operations during the initial day and night sortie. | | | | | | | | |
| 2 PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | |
| 3 EMERGENCY PROCEDURES | | | | | | | | |
| 4 PREVIOUS STAGE DND | | | | | | | | |

(b)(6) (b)(3) 10 U.S.
Code § 130b

| | | | | |
|-------|------|--|---|----------|
| GRADE | 4.00 | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
|-------|------|--|---|----------|

STUDENT SIGN

NEXT IP REVIEW

DTV HEAD REVIEW

(b)(6) (b)(3)
10 U.S.

VMM-265

AVIATION TRAINING FORM

| | | | |
|------------------------|-------------|-------------------------------|------------|
| <u>INSTRUCTOR</u> | (b)(6) (b) | <u>NAME</u> | (b)(6) (b) |
| <u>DATE</u> | 19-Mar-2015 | <u>DEVICE</u> | Classroom |
| <u>FLIGHT TIME</u> | 0.0 | <u>AIRCRAFT ID</u> | |
| <u>T/M/S</u> | MV-22 | <u>T&R CODES (AS REQ)</u> | ACAD-2410 |
| <u>GEOGRAPHIC INFO</u> | | | |

| ITEM | | DND | UNSAT | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|-------|---|---|---|---|--|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | Instructor Comments |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | Flight Narrative: |
| 3 | EMERGENCY PROCEDURES | | | | | | | ACAD 2410 (AAR Lecture)Complete in accordance with T&R. |
| 4 | PREVIOUS STAGE DND | | | | | | | |

Strengths:
N/A

Areas for Improvement:
N/A

Instructor/Operations Information:
ACAD 2410 (AAR Lecture)Complete in accordance with T&R.

| | | | | |
|--|--------|--|---|----------|
| <div style="border: 1px solid black; padding: 5px; display: inline-block;"> (b)(6) (b) (3) 10 U.S. C d \$ </div> | GRADE | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
| INSTRUCTOR SIGN | T SIGN | NEXT IP REVIEW | DIV HEAD REVIEW | |



VMM-265

AVIATION TRAINING FORM



Date
IP
PUJ
T&R CODE

26-May-15
(b)(6) (b)(3)
10 U.S.
2431

UNIT: VMM-265 (Rein)
FLIGHT TIME

3

| ITEM | DND | Unsat | 1 | 2 | 3 | 4 | REMARKS |
|---|-----|-------|---|---|---|---|---|
| 1 PLAN & PREP | | | | | | | Overview: (b)(6) (b)(3) RECEIVED (b)(3) DAY INITIAL AIR- TO AIR REFUELING TRAINING DURING A TRANS-PACIFIC FLIGHT FROM OKINAWA TO SINGAPORE IN SUPPORT OF AN (b)(3) (b)(3) |
| a Problem Framing | | | | X | | | |
| b Time Management | | | | X | | | |
| c Mission Products | | | | X | | | |
| 2 BRIEF | | | | | | | Plan: (b)(6) (b)(3) ASSISTED IN THE FUEL PLANNING FOR THE MISSION AND DEMONSTRATED SOUND KNOWLEDGE OF JMPS MISSION PLANNING (b)(3) ALSO LEARNED A GREAT DEAL ABOUT MV-22- KC-10 OPERATIONS. |
| a Admin IAW SOP | | | | X | | | |
| b Delivery IAW target audience | | | | X | | | |
| c Time Management | | | | X | | | |
| d Training Objectives | | | | | X | | Brief: T&R DISCUSSION WAS SOLID, AND DEMONSTRATED GOOD KNOWLEDGE OF TAAR PROCEDURES. |
| e Tac Admin IAW TACSOP | | | | X | | | |
| f Tactical brief IAW TACSOP | X | | | | | | Execution: (b)(6) (b)(3) EXECUTED (b)(3) TRAINING ON THE BACKUP TANKER (KC-130J) ON A LARGER MOVEMENT TO SINGAPORE FROM OKINAWA. (b)(3) INITIAL TANKER FLOW WAS OVERLY AGGRESSIVE MOVING FROM THE LEFT OBS TO THE ASTERN, CAUSING THE IP TO TAKE CONTROLS. AFTER RESETTING BACK TO THE LEFT OBS, (b)(6) (b)(3) EXECUTED THE MANEUVER PROPERLY, AND HAD LEARNED THAT SLOW IS SMOOTH DURING TAAR OPERATIONS. (b)(3) HAD NO ISSUES MAKING CONTACT WITH THE BASKET, AND STAYING IN POSITION. AFTER A FINAL WET PLUG, WE RETURNED TO THE TRAIL FORMATION TO CONTINUE TO SINGAPORE USING THE KC-10 AS A REFUELING PLATFORM. |
| g Tactical content IAW program guide requirements | X | | | | | | |
| h System Knowledge | | | | X | | | |
| 3 GENERAL EXECUTION | | | | | | | |
| a Professionalism | | | | | X | | |
| b Airwork | | | X | | | | |
| c Communications | | | X | | | | |
| d Crew Resource Management | | | | X | | | |
| e Formation Procedures | | | X | | | | |
| f NATOPS Adherence | | | | X | | | |
| g Navigation | | | | X | | | |
| 4 FLIGHT LEADERSHIP | | | | | | | |
| a Make sound admin decisions | X | | | | | | |
| b Make sound tactical decisions | X | | | | | | |
| c Communicates Intentions | X | | | | | | |
| d Safely lead and control aircraft within flight | X | | | | | | |
| e Adherence to SOP | X | | | | | | |
| f Demonstrates sound tactical execution | X | | | | | | |
| g Responds to unplanned circumstances | | | X | | | | |
| h Maintains Situational Awareness | X | | | | | | |
| 5 SPECIFIC EXECUTION | | | | | | | |
| a Lighting | | | | X | | | |
| b Cockpit Setup | | | | X | | | |
| c Join-up | | | X | | | | |
| d Section CALS | X | | | | | | |
| e Tactical Formation | | | X | | | | |
| f LAT Profile/Nav | X | | | | | | |
| g L-Hour | X | | | | | | |
| h Waveoffs | X | | | | | | |
| i Interflight Communication | | | X | | | | |
| 6 DEBRIEF | | | | | | | |
| a Accurately Assess Mission Performance Standards | | | X | | | | |
| b Recall / Reconstruction | | | X | | | | |
| c Analysis | | | X | | | | |

(b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code § 130b

☒ Satisfactory ☐ Unsatisfactory
(b)(6) (b)(3) 10 U.S. Code § 130b

INSTRUCTOR SIGN

STUDENT SIGN

2431

VMM-265

AVIATION TRAINING FORM

INSTRUCTOR (b)(6) (b)(3)
DATE 22-May-2015
FLIGHT TIME 1.0
T/M/S MV-22

NAME (b)(6) (b)(3)
DEVICE MV-22 7 (CFTD) OK
AIRCRAFT ID 0
T&R CODES (AS REQ) SAAR-2432
GEOGRAPHIC INFO

| ITEM | | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|-------|---|---|---|---|---|---|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments Flight Narrative: Conducted NSAAR following day AAR IVO Okinawa. No major problems not noted in 2430 ATF. Good knowledge in brief and decent work behind the basket. Demonstrated different light levels and visibility including no-horizon. Need to work slightly on NVG scan and staying in the basket after contact. Strengths: Knowledge. Areas for Improvement: Maintaining position after contact. Instructor/Operations Information: None. |
| a | Briefing | | | | | X | | | |
| b | Basic Airwork | | | | | X | | | |
| c | Headwork | | | | | X | | | |
| d | Introduce NVD AAR | | | | | X | | | |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | |
| 3 | EMERGENCY PROCEDURES | | | | | | | | |
| 4 | PREVIOUS STAGE DND | | | | | | | | |

(b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code § 130b

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|-----------------|------|--|---|----------|
| DE | 3.00 | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
| DIV HEAD REVIEW | | | | |

(b)(6) (b)(3) 10 U.S. Code § 130b



VMM-265

AVIATION TRAINING FORM



INSTRUCTOR (b)(6) (b)
DATE 24-Nov-2015
FLIGHT TIME 3.0
T/M/S MV-22

NAME (b)(6) (b)
DEVICE Aircraft
AIRCRAFT ID 00 (168220)
T&R CODES (AS REQ) AAR-2433
GEOGRAPHIC INFO

| ITEM | | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|------|---|-----|-------|---|---|---|---|---|--|
| 1 | PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments Flight Narrative: Flight was conducted in the Shooter track as the first part of a NS TAAR & NS TG flight. TAAR flown with an MC-130J from 17th SOS. Plan and brief were delivered by IP. Knowledge of EMCON and EPs and tanker flow at night was average, needed some coaching but the prep work was there, just not completely grasped (b)(6) had trouble at first, staring at the basket and multiple stabs to misses. A guided plug and then one where (b) followed on the controls seemed to finally get the click. As the tanker was about to depart (less than 8 minutes remaining on station and us needing 5 K in gas IOT execute TG) I told (b) only got one chance otherwise I was taking it, because we needed gas. (b) failed it, had no issues staying in the basket and finally started flying form off the big plane and not the little basket. Strengths: Getting gas in the clutch. Areas for Improvement: Form control, remember to hit the checkpoints we talked about...the T and the wing, fly form off the big tanker at a close astern, and, if necessary, wiggle your fingers and wiggle your toes. Instructor/Operations Information: N/A |
| a | Briefing | | | | | X | | | |
| b | Basic Airwork | | | | | X | | | |
| c | Headwork | | | | | X | | | |
| d | Introduce Rendezvous (minimum of 2). | | | | X | | | | |
| e | Introduce Tanker flow. | | | | | X | | | |
| f | Introduce Contact/fuel transfer. | | | | | X | | | |
| g | Introduce Post AAR procedures. | | | | | X | | | |
| h | Introduce EMCON tanker procedures (EMCON condition 3 or 4). | | | | | X | | | |
| 2 | PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | |
| a | Introduce Emergency breakaway. | | X | | | | | | |
| 3 | EMERGENCY PROCEDURES | | | | | | | | |
| 4 | PREVIOUS STAGE DND | | | | | | | | |

(b)(6) (b)(3) 10 U.S. Code § 130b
(b)(6) (b)(3) 10 U.S. Code § 130b

| | | | |
|----------------|--|---|----------|
| 2.88 | <input checked="" type="checkbox"/> Satisfactory | <input type="checkbox"/> Unsatisfactory | COMPLETE |
| NEXT IP REVIEW | | DIV HEAD REVIEW | |

VMM-265

AVIATION TRAINING FORM

INSTRUCTOR (b)(6) (b)(3)
 DATE 22-May-2015
 FLIGHT TIME 1.0
 T/M/S MV-22

NAME (b)(6) (b)(3)
 DEVICE MV-22 7 (CFTD) OK
 AIRCRAFT ID 0
 T&R CODES (AS REQ) SAAR-2430
 GEOGRAPHIC INFO

| ITEM | DND | UNSAT | 1 | 2 | 3 | 4 | 5 | REMARKS |
|---|-----|-------|---|---|---|---|---|---|
| 1 PERFORMANCE EVALUATION - MEASURED ITEMS | | | | | | | | Instructor Comments |
| a Briefing | | | | | X | | | Flight Narrative: |
| b Basic Airwork | | | | | X | | | Conducted AAR IVO Okinawa. Join up and rendezvous without issue. Demonstrated all positions around tanker without any problems. No major problems behind the tanker out of the ordinary for the sim. Initial difficulty maintaining trim and position, especially after contact. Lots of PIO near the beginning of the sim but mostly due to the nature of the sim controls. By the end, no problems making contact on either side and in a turn. Still showed some problems staying in the basket, but again this was mostly due to the sim and it's incorrect disconnect point Good sim, should have no problems in the aircraft. |
| c Headwork | | | | | X | | | |
| d Introduce Basic scan and flight techniques required for AAR | | | | | X | | | |
| e Introduce Medium and high altitude, high gross weight AAR profiles. | | | | | X | | | |
| f Introduce Rendezvous (minimum of 2 for initial events) | | | | | X | | | |
| g Introduce Join-up. | | | | | X | | | |
| h Introduce Contact/fuel transfer. | | | | | X | | | |
| i Introduce Post AAR procedures. | | | | | X | | | |
| j Introduce Emergency breakaway. | | | | | X | | | |
| 2 PERFORMANCE EVALUATION - ITEMS DND | | | | | | | | Strengths: |
| 3 EMERGENCY PROCEDURES | | | | | | | | Knowledge. |
| 4 PREVIOUS STAGE DNDs | | | | | | | | Areas for Improvement: |
| | | | | | | | | Air work after contact. |

Instructor/Operations Information:
 None

(b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) 10 U.S. Code § 130b
 STUDENT SIGN

3.00

(b)(6) (b)(3) 10 U.S. Code § 130b

Unsatisfactory

COMPLETE

DIV HEAD REVIEW

(b)(6) (b)(3)
 10 U.S.

Enclosure 45

Summary Testimony of REDACTED

3 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)

Appendix A
MV-22 Procedures

| 1000. PLANNING | |
|--------------------------------------|---|
| ITEM | STANDING METHOD / GUIDANCE |
| Load Computation | <ul style="list-style-type: none"> ➤ Useable load shall be calculated: A 5% HOGE power margin (calculated based on Qm available with interim power selected) shall be used for all land based VTOL flight operations, a 5% HOGE power margin using 112% max Qm available for shipboard VTOL operations. 10% power margin required for all training external load operations. ➤ For land-based STO operations with less than 5% HOGE, a TOLD card shall be completed. ➤ Shipboard STO operations shall be conducted IAW ref (b). Pilots shall complete a load computation card IOT determine at least a 5% HOGE from 112% gross weight for emergency-return considerations. |
| Fuel Planning | <ul style="list-style-type: none"> ➤ Pilots shall plan to land with no less than 1200 lbs. ➤ <u>Battery Fuel</u>: Fuel state when the battery power is applied to the aircraft. ➤ <u>Takeoff Fuel</u>: Max planned fuel at the time of takeoff IOT land at LZ with required HOGE Qm margin usable load. ➤ <u>Joker Fuel</u>: Bingo fuel plus 700 lbs (~15 mins) at planned altitude, unless otherwise briefed by the FL. ➤ <u>Mission Fuel</u>: The minimum fuel required to fly planned mission and land at SOP minimums. ➤ <u>Bingo Fuel</u>: Fuel state needed for recovery. Bingo should be calculated at 200 KCAS and planned flight altitude unless METT-TSL dictates otherwise. ➤ <u>HOTSEATS</u>: Unless otherwise noted on the flight schedule or dictated by the FLIAC, events should land at scheduled land time and taxi in to the line for the hot seat. The incoming crew will taxi for their mission fuels. |
| Route Planning | <ul style="list-style-type: none"> ➤ The ASO shall ensure hazard information is current in JMPS MCHUM files, with the assistance of the NAVO. ➤ Flights should be conducted with obstacles illustrated by drawing files (VVOD converted to MCHUM, or drawing files). |
| Maintenance Coordination | <ul style="list-style-type: none"> ➤ Operations shall ensure A/C configuration requirements are identified and relayed to Maintenance Control via the flight schedule (ICS cranials, static lines, litters and stanchions, etc.). |
| Joint Mission Planning System (JMPS) | <ul style="list-style-type: none"> ➤ Conducted IAW ref (o) MV-22 Combat Aircraft Fundamentals. ➤ Plan for at least 2 HA's, 2 IP's, & 2 LZ's (Primary and Alternate Ingress/Egress) ➤ HA's, IP's, & LZ/LP's should be named IAW ref (n), and based on cardinal directions (ex. HA Sally or IP Subaru for southern points, HA Nora or IP Nissan for northern points). |

ENCLOSURE (1)



MV-22B Pilots



December 13, 16 08:33

| Highlight | | > 15 | > 15 | | | | | > 30 | > 60 | > 120 | > 180 | | | | | |
|-----------------------------------|---------------|----------------|-----------------|-------------------|-----------|-----------|-----------------|-----------------|--------------|--------------|--------------|------------------|-----------------|-----------|----------|-------------|
| Highlight | | > 15 | > 15 | | | | | > 30 | > 60 | > 120 | > 180 | | | | | |
| Name | CURRENT MONTH | LAST FLIGHT | LAST NVG FLIGHT | TNVG LAST 30 DAYS | TOTAL NVG | TOTAL LLL | LAST RVL | LAST LAT | LAST 30 DAYS | LAST 60 DAYS | LAST 90 DAYS | TOTAL MV-22 TIME | TOTAL TAC HOURS | TOTAL HRS | FY HOURS | FY SIM TIME |
| Assigned to permanent unit | | | | | | | | | | | | | | | | |
| (b)(6) (b)(3) 10 U.S. Code § 130b | 9.3 | 12/08/16 - 4 | 11/21/16 - 21 | 4.0 | 788.9 | 398.6 | 12/08/16 - 4 | 11/18/16 - 24 | 15.3 | 36.8 | 47.9 | 1895.4 | 1320.7 | 3131.4 | 36.8 | 0.0 |
| | 0.0 | 11/22/16 - 20 | 11/04/16 - 38 | 0.0 | 491.4 | 305.8 | 11/21/16 - 21 | 08/03/16 - 131 | 6.5 | 25.7 | 35.8 | 1319.2 | 816.0 | 1569.9 | 28.7 | 0.0 |
| | 13.8 | 12/13/16 - 0 | 12/08/16 - 4 | 5.0 | 642.3 | 323.0 | 11/04/16 - 38 | 12/02/16 - 10 | 9.8 | 40.7 | 50.8 | 405.3 | 148.5 | 2562.8 | 54.6 | 0.0 |
| | 17.5 | 12/12/16 - 0 | 12/06/16 - 6 | 15.5 | 614.8 | 313.2 | 12/12/16 - 0 | 12/12/16 - 0 | 32.7 | 65.7 | 84.4 | 1550.2 | 998.3 | 1809.3 | 74.2 | 4.2 |
| | 4.6 | 12/06/16 - 6 | 12/02/16 - 10 | 3.7 | 314.6 | 158.5 | 11/21/16 - 21 | 12/02/16 - 10 | 16.7 | 34.2 | 44.7 | 716.9 | 302.2 | 1941.5 | 42.0 | 2.0 |
| | 0.0 | 11/22/16 - 20 | 11/22/16 - 20 | 2.7 | 53.1 | 25.3 | 11/07/16 - 35 | 07/13/16 - 152 | 4.3 | 26.1 | 74.7 | 427.9 | 83.4 | 644.5 | 50.1 | 2.1 |
| | 11.0 | 12/13/16 - 0 | 11/04/16 - 38 | 0.0 | 44.4 | 20.9 | 11/04/16 - 38 | 12/07/16 - 5 | 12.5 | 32.9 | 47.4 | 243.3 | 0.0 | 458.7 | 42.2 | 8.5 |
| | 0.0 | 11/22/16 - 20 | 11/04/16 - 38 | 0.0 | 58.0 | 33.9 | 11/04/16 - 38 | 08/04/16 - 130 | 4.7 | 30.5 | 56.1 | 378.6 | 57.8 | 580.0 | 36.8 | 4.0 |
| | 14.4 | 12/13/16 - 0 | 11/17/16 - 25 | 0.6 | 74.6 | 33.6 | 12/13/16 - 0 | 12/13/16 - 0 | 12.0 | 45.8 | 63.4 | 476.8 | 142.4 | 693.3 | 60.2 | 6.1 |
| | 9.8 | 12/13/16 - 0 | 12/08/16 - 4 | 10.2 | 75.0 | 47.3 | 11/04/16 - 38 | 07/22/16 - 143 | 17.3 | 46.6 | 48.5 | 364.2 | 53.7 | 573.8 | 50.6 | 2.0 |
| | 4.0 | 12/02/16 - 10 | 11/22/16 - 20 | 2.0 | 124.6 | 71.6 | 11/04/16 - 38 | 12/02/16 - 10 | 12.6 | 46.8 | 49.9 | 659.0 | 232.0 | 887.0 | 48.3 | 2.0 |
| | 11.1 | 12/08/16 - 5 | 12/08/16 - 5 | 11.1 | 176.3 | 100.2 | 11/04/16 - 38 | 12/02/16 - 10 | 18.6 | 46.7 | 65.7 | 803.2 | 284.8 | 1012.9 | 58.7 | 10.0 |
| | 14.5 | 12/13/16 - 0 | 12/08/16 - 4 | 11.8 | 202.9 | 109.9 | 12/12/16 - 0 | 12/13/16 - 0 | 21.6 | 35.0 | 61.1 | 833.9 | 338.4 | 1047.1 | 57.6 | 4.0 |
| | 13.8 | 12/13/16 - 0 | 01/25/16 - 150 | 0.0 | 77.5 | 44.4 | 12/13/16 - 0 | 12/13/16 - 0 | 18.2 | 23.9 | 27.8 | 549.5 | 178.2 | 769.4 | 30.2 | 2.0 |
| | 6.0 | 12/13/16 - 0 | 12/13/16 - 0 | 8.0 | 154.4 | 82.5 | 11/17/16 - 25 | 12/02/16 - 10 | 13.0 | 45.7 | 70.5 | 661.9 | 216.0 | 873.8 | 56.8 | 10.0 |
| | 12.0 | 12/08/16 - 5 | 12/08/16 - 5 | 2.1 | 44.5 | 18.6 | 12/12/16 - 0 | 12/07/16 - 5 | 20.0 | 44.8 | 55.1 | 271.5 | 0.0 | 485.1 | 53.1 | 10.0 |
| | 2.0 | 12/02/16 - 10 | 12/02/16 - 10 | 4.0 | 47.3 | 24.5 | 11/17/16 - 25 | 12/02/16 - 10 | 6.9 | 23.8 | 46.1 | 290.9 | 0.0 | 525.3 | 29.0 | 10.9 |
| | 4.7 | 12/13/16 - 0 | 09/09/16 - 47 | 0.0 | 24.4 | 7.5 | 12/13/16 - 0 | 12/13/16 - 0 | 7.5 | 21.8 | 34.3 | 181.5 | 0.0 | 402.7 | 31.8 | 7.8 |
| | 9.2 | 12/08/16 - 5 | 12/02/16 - 10 | 10.0 | 25.1 | 6.5 | 12/08/16 - 5 | 12/02/16 - 10 | 16.7 | 40.9 | 45.4 | 109.4 | 0.0 | 321.9 | 42.4 | 0.0 |
| | 12.4 | 12/12/16 - 0 | 12/02/16 - 10 | 1.8 | 80.0 | 43.4 | 11/04/16 - 38 | 12/07/16 - 5 | 16.4 | 37.6 | 50.6 | 448.3 | 73.6 | 659.8 | 39.4 | 8.5 |
| | 13.7 | 12/13/16 - 0 | 12/13/16 - 0 | 7.5 | 12.7 | 0.0 | 11/07/16 - 35 | 12/12/16 - 0 | 13.7 | 13.7 | 17.7 | 42.3 | 0.0 | 236.1 | 15.7 | 16.0 |
| | 9.3 | 12/13/16 - 0 | 12/02/16 - 10 | 4.0 | 20.6 | 5.7 | 12/08/16 - 4 | 12/07/16 - 5 | 14.1 | 36.1 | 42.2 | 140.8 | 0.0 | 350.0 | 41.4 | 12.0 |
| | 12.4 | 12/12/16 - 0 | 12/08/16 - 4 | 7.5 | 12.8 | 0.0 | 11/07/16 - 35 | 12/12/16 - 0 | 14.4 | 14.4 | 14.4 | 43.1 | 0.0 | 232.3 | 14.4 | 18.0 |
| | 11.6 | 12/13/16 - 0 | 11/21/16 - 21 | 7.4 | 21.3 | 7.1 | 12/08/16 - 5 | 11/17/16 - 25 | 15.0 | 25.3 | 42.8 | 128.2 | 0.0 | 330.2 | 35.3 | 11.9 |
| | 0.0 | 11/22/16 - 20 | 09/17/16 - 151 | 0.0 | 5.5 | 0.0 | - | - | 0.0 | 4.9 | 18.9 | 29.0 | 0.0 | 220.5 | 12.4 | 11.0 |
| | 8.7 | - | - | 4.8 | 167.5 | 87.3 | - | - | 13.6 | 33.9 | 47.8 | 518.8 | 209.8 | 892.8 | 41.7 | 6.5 |
| y unit | | | | | | | | | | | | | | | | |
| (b)(6) (b)(3) 10 U.S. Code § 130b | 0.0 | 10/13/16 - 50 | 08/28/16 - 2586 | 0.0 | 1835.4 | 1000.8 | - | - | 0.0 | 6.8 | 6.8 | 49.6 | 0.0 | 6456.4 | 6.8 | 0.0 |
| | 0.0 | 10/13/16 - 50 | 08/28/16 - 2586 | 0.0 | 1835.4 | 1000.8 | - | - | 0.0 | 6.8 | 6.8 | 49.6 | 0.0 | 6456.4 | 6.8 | 0.0 |
| | 0.0 | 11/22/16 - 20 | 09/22/16 - 171 | 0.0 | 776.9 | 464.7 | 11/22/16 - 20 | 11/22/16 - 20 | 4.0 | 5.2 | 8.2 | 367.7 | 170.7 | 2680.6 | 5.2 | 0.0 |
| | 0.0 | 12/24/16 - 50 | 03/24/16 - 263 | 0.0 | 441.8 | 227.7 | 05/26/16 - 201 | 12/08/16 - 365 | 0.0 | 2.0 | 2.0 | 675.9 | 316.7 | 2111.2 | 2.0 | 2.0 |
| | 0.0 | 08/10/16 - 124 | 07/20/16 - 195 | 0.0 | 701.9 | 347.1 | 07/06/16 - 159 | 08/01/16 - 193 | 0.0 | 0.0 | 0.0 | 219.6 | 28.1 | 2837.5 | 0.0 | 2.0 |
| | 0.0 | 10/21/16 - 52 | 02/07/16 - 238 | 0.0 | 302.9 | 179.5 | 09/14/16 - 89 | 02/18/16 - 208 | 0.0 | 4.3 | 4.5 | 197.0 | 30.8 | 1757.9 | 4.3 | 2.0 |
| | 8.5 | 12/08/16 - 4 | 12/08/16 - 4 | 9.2 | 552.6 | 315.4 | 12/07/16 - 5 | 12/07/16 - 5 | 20.0 | 33.0 | 61.8 | 1634.8 | 1101.6 | 1862.1 | 52.4 | 11.0 |
| | 0.0 | 06/24/16 - 173 | 06/15/16 - 126 | 0.0 | 316.9 | 159.4 | 06/05/16 - 1288 | 06/24/16 - 1323 | 0.0 | 0.0 | 0.0 | 438.1 | 185.3 | 1366.7 | 0.0 | 3.9 |
| | 0.0 | 11/17/16 - 25 | 11/17/16 - 25 | 1.5 | 16.8 | 4.6 | 10/17/16 - 56 | 11/17/16 - 25 | 1.5 | 16.4 | 31.2 | 144.6 | 0.0 | 365.6 | 20.7 | 0.0 |
| | | | | | | | | | | | | | | | | |

| Highlight | | > 15 | > 15 | | | | | > 30 | > 60 | > 120 | > 180 | | | | | |
|-----------|---------------|----------------|-----------------|-------------------|-----------|-----------|----------------|----------------|--------------|--------------|--------------|------------------|-----------------|-----------|----------|-------------|
| Expired | | > 30 | > 30 | | | | | > 150 | > 100 | > 200 | > 300 | | | | | |
| Name | CURRENT MONTH | LAST FLIGHT | LAST NVG FLIGHT | TNVG LAST 30 DAYS | TOTAL NVG | TOTAL LLL | LAST RVL | LAST LAT | LAST 30 DAYS | LAST 60 DAYS | LAST 90 DAYS | TOTAL MV-22 TIME | TOTAL TAC HOURS | TOTAL HRS | FY HOURS | FY SIM TIME |
| 6-6-6-6 | 0.0 | 08/24/16 - 116 | 06/20/16 - 175 | 0.0 | 218.9 | 118.9 | 06/09/16 - 186 | 07/12/16 - 153 | 0.0 | 0.0 | 0.0 | 980.6 | 446.7 | 1219.8 | 0.0 | 0.0 |
| | 0.9 | - | - | 1.1 | 700.0 | 381.9 | - | - | 2.6 | 7.5 | 12.1 | 475.8 | 228.0 | 2,711.4 | 9.8 | 2.1 |



MV-22B Aircrew



December 12, 16 14:55

| Highlight | > 60 | > 120 | > 180 | | | | > 30 | > 15 | | > 180 | > 15 | | | | |
|-----------|--------------------|--------------------|--------------------|--------------|--------------|-----------|-------------|-----------------------|----------------------------|-------------|----------------|------------------|-----------------|---------------------------|------------------------------|
| Expired | > 100 | > 200 | > 300 | | | | > 180 | > 30 | | > 300 | > 30 | | | | |
| Name | LAST 30 DAYS | LAST 60 DAYS | LAST 90 DAYS | TOTAL NVG | TOTAL LLL | FY Hrs | LAST LAT | Last NVG Flight | TNMG LAST 30 DAYS | Last EXT | Last Flight | CURRENT MONTH | Career Total | MV-22B CAREER HOURS | FY TOTAL NIGHT TIME |

MV-22B Aerial Observer/Gunner

6

| | | | | | | | | | | | | | | | |
|-----------------------------------|------|------|-------|-------|-------|------|----------------|----------------|------|----------------|----------------|------|--------|--------|------|
| (b)(6) (b)(3) 10 U.S. Code § 130b | 2.0 | 2.0 | 20.6 | 0.0 | 0.0 | 7.3 | - | - | 0.0 | - | 11/18/16 - 24 | 0.0 | 20.6 | 20.6 | 0.0 |
| | 17.1 | 51.5 | 69.6 | 65.4 | 25.0 | 59.8 | 12/02/16 - 10 | 10/04/16 - 38 | 0.0 | 11/22/16 - 19 | 12/08/16 - 3 | 11.3 | 427.3 | 427.3 | 14.6 |
| | 0.0 | 12.4 | 12.4 | 20.5 | 3.3 | 12.4 | 10/13/16 - 59 | 10/26/16 - 46 | 0.0 | - | 10/29/16 - 46 | 0.0 | 97.9 | 97.9 | 6.7 |
| | 7.5 | 28.8 | 41.2 | 49.7 | 27.4 | 38.7 | 10/13/16 - 59 | 12/08/16 - 3 | 7.5 | - | 12/08/16 - 3 | 3.5 | 196.9 | 196.9 | 15.6 |
| | 4.5 | 16.8 | 26.7 | 43.2 | 20.5 | 26.7 | 06/30/16 - 164 | 11/04/16 - 38 | 0.0 | - | 12/06/16 - 6 | 4.5 | 308.3 | 308.3 | 4.1 |
| | 10.0 | 24.2 | 34.1 | 0.0 | 0.0 | 34.1 | 11/18/16 - 24 | - | 0.0 | - | 11/22/16 - 20 | 0.0 | 59.0 | 59.0 | 0.0 |
| | 6.9 | 22.6 | 34.1 | 29.8 | 12.7 | 29.8 | - | - | 1.3 | - | - | 3.2 | 185.0 | 185.0 | 6.8 |
| | 0.0 | 0.0 | 0.0 | 516.4 | 278.2 | 0.0 | 08/02/16 - 191 | 05/26/16 - 199 | 0.0 | 08/01/16 - 122 | 05/02/16 - 193 | 0.0 | 1600.5 | 1600.5 | 0.0 |
| | 2.0 | 45.6 | 62.4 | 93.8 | 44.1 | 51.1 | 08/31/16 - 102 | 10/04/16 - 38 | 0.0 | 10/27/16 - 45 | 11/18/16 - 24 | 0.0 | 496.9 | 496.9 | 11.0 |
| | 26.7 | 55.5 | 82.5 | 320.3 | 166.5 | 74.0 | 12/12/16 - 0 | 11/04/16 - 38 | 0.0 | 12/02/16 - 10 | 12/12/16 - 0 | 12.7 | 1453.1 | 480.4 | 17.0 |
| | 7.1 | 14.0 | 30.2 | 62.7 | 25.3 | 22.3 | 12/02/16 - 9 | 12/02/16 - 9 | 7.0 | - | 12/02/16 - 9 | 3.6 | 678.1 | 331.7 | 13.4 |
| | 12.8 | 20.7 | 57.2 | 255.6 | 142.2 | 33.4 | 12/12/16 - 0 | 10/20/16 - 52 | 0.0 | 10/01/16 - 72 | 12/12/16 - 0 | 12.8 | 844.2 | 844.2 | 8.1 |
| | 28.0 | 68.4 | 104.2 | 282.5 | 134.8 | 76.9 | 12/02/16 - 9 | 12/08/16 - 3 | 20.2 | 10/27/16 - 45 | 12/08/16 - 3 | 11.5 | 929.3 | 929.3 | 44.4 |
| | 32.6 | 60.8 | 60.8 | 556.7 | 317.5 | 60.8 | 12/08/16 - 4 | 12/02/16 - 9 | 13.8 | 11/22/16 - 19 | 12/08/16 - 4 | 15.1 | 1593.7 | 1593.7 | 19.4 |
| | 31.6 | 73.3 | 86.6 | 96.0 | 47.6 | 86.2 | 12/12/16 - 0 | 11/22/16 - 19 | 10.2 | 10/27/16 - 45 | 12/12/16 - 0 | 18.6 | 381.7 | 381.7 | 32.1 |
| | 19.0 | 55.3 | 74.4 | 62.8 | 32.0 | 60.5 | 10/17/16 - 55 | 12/08/16 - 3 | 15.8 | 11/22/16 - 19 | 12/08/16 - 3 | 7.5 | 242.8 | 242.8 | 30.7 |
| | 15.7 | 29.9 | 60.2 | 245.1 | 136.1 | 49.1 | 12/08/16 - 4 | 12/02/16 - 9 | 3.5 | 07/12/16 - 152 | 12/08/16 - 3 | 15.7 | 825.8 | 825.8 | 18.0 |
| | 0.0 | 0.0 | 0.0 | 589.3 | 316.4 | 0.0 | 03/12/16 - 201 | 04/03/16 - 250 | 0.0 | 12/01/16 - 370 | 04/25/16 - 221 | 0.0 | 2224.6 | 1505.1 | 0.0 |
| | 23.6 | 46.2 | 96.4 | 38.7 | 19.1 | 69.4 | 12/02/16 - 10 | 10/04/16 - 38 | 0.0 | 08/25/16 - 109 | 12/08/16 - 4 | 15.8 | 274.0 | 274.0 | 3.8 |
| | 33.3 | 52.0 | 84.3 | 160.0 | 101.5 | 57.5 | 12/08/16 - 4 | 12/02/16 - 9 | 15.5 | 11/22/16 - 19 | 12/08/16 - 4 | 16.1 | 681.9 | 681.9 | 19.6 |
| | 22.6 | 61.3 | 86.3 | 49.7 | 10.1 | 66.5 | 11/21/16 - 21 | 12/08/16 - 3 | 7.5 | 11/22/16 - 20 | 12/08/16 - 3 | 11.3 | 295.4 | 295.4 | 16.6 |
| | 24.4 | 24.4 | 26.9 | 32.0 | 12.5 | 24.4 | 11/18/16 - 24 | 11/21/16 - 20 | 4.0 | 11/22/16 - 19 | 12/12/16 - 0 | 16.4 | 153.7 | 153.7 | 4.3 |
| | 25.7 | 63.8 | 66.8 | 38.0 | 14.3 | 66.8 | 12/02/16 - 9 | 12/06/16 - 5 | 12.0 | 10/27/16 - 45 | 12/08/16 - 4 | 15.7 | 238.4 | 238.4 | 28.4 |
| | 0.0 | 0.0 | 0.0 | 213.5 | 139.4 | 0.0 | 08/06/16 - 127 | 08/23/16 - 110 | 0.0 | 08/05/16 - 128 | 08/29/16 - 105 | 0.0 | 652.2 | 652.2 | 0.0 |
| | 21.0 | 52.8 | 81.0 | 51.1 | 21.2 | 61.3 | 12/02/16 - 9 | 12/08/16 - 3 | 15.8 | 11/22/16 - 19 | 12/08/16 - 3 | 7.7 | 203.1 | 203.1 | 33.6 |
| | 11.0 | 55.0 | 70.5 | 189.1 | 100.4 | 65.8 | 11/17/16 - 24 | 12/08/16 - 3 | 11.0 | 10/27/16 - 45 | 12/08/16 - 3 | 3.5 | 653.8 | 653.8 | 33.7 |
| | 15.7 | 47.3 | 54.4 | 28.9 | 12.8 | 48.8 | 12/12/16 - 0 | 10/04/16 - 38 | 0.0 | 12/02/16 - 10 | 12/12/16 - 0 | 5.0 | 246.9 | 246.9 | 6.0 |
| | 17.6 | 41.3 | 59.3 | 194.1 | 103.6 | 48.7 | - | - | 6.8 | - | - | 9.5 | 733.5 | 631.6 | 17.0 |

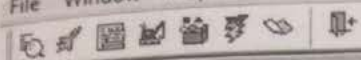
20

Enclosure 48

Summary Testimony of REDACTED

2 pages

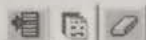
Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)



Automated Aircraft Discrepancy Book

ORG: GH5 BUNO: 168027 TMS: MV-22B Next Phase: 72,900 Hours Up/Down/Partial: P
MODEX: 06 Assy Cd: AYNE Basic Wgt: 34759 Acft Hours: 1,042.300 Last Flown: 13 DEC 2016 1200

Engine/APU/Prop Data | Open Work Orders | Awaiting Maintenance Control Approval | Closed Work Orders Last 10 Flights
Acceptance For Flight | Consumption | Inspections Near Due | Removals Near Due | Summary



Oxy Qty

1,800.00

Fuel Grade: JPS

Fuel Qty:

11,000.00

Oil Grade

Oz. Of Oil Added

Multiplier

Description

Hot Seat Ind: YES

Ordnance:

Special
Equipment: NO ENG SERVICING REQUIRED

Limitations: THE FOLLOWING EOC CODES APPLY: (H) (I)
(H) LH BRAKES, (I) LH PRPRTR DEICE (I) LH RED BLADE

Pilot Signature Da

13 DEC 2016 1655

I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on a work order.

Certification of safe for flight condition by MMCO, MO or MCO. If authorized, other persons may sign.

I've reviewed discrepancy reports of 1 flights, insured wgt. and balance dat accept this aircraft for flight.

Signatures:

Plane Captain:

Safe for Flight: (b)(6) (b)

Pilot: (b)(6) (b)

A-Sheet | Daily Maint. Record | Turnaround Maint. Record | Aircraft Limitations | Daily/Turnaround - Local Card Reference | Last 10 A-Sheets

UNCLAS

MV-22 MLG FIRE SUPPRESSION BOTTLE DEVIATION REQUEST

Originator: COMNAVAIRFOR SAN DIEGO CA

DTG: 200716Z Jan 16 Precedence: P DAC: General

To: VMM TWO SIX FIVE

CC: CG FIRST MAW, MAG THREE SIX, MALS THREE SIX

PAAUZYUW RUOISTA7754 0201628-UUUU--RUJDAAA.

ZNR UUUUU

P 200716Z JAN 16 ZYB

FM COMNAVAIRFOR SAN DIEGO CA

TO RUJDAAA/VMM TWO SIX FIVE

INFO ZEN/COMNAVAIRSYS COM PATUXENT RIVER MD

ZEN/FLTREADCEN SOUTHWEST SAN DIEGO CA

ZEN/FLTREADCEN EAST CHERRY POINT NC

RUJDAAA/CG FIRST MAW

RUJDAAA/MAG THREE SIX

RUJDAAA/MALS THREE SIX

ZEN/COMNAVAIRLANT NORFOLK VA

BT

UNCLAS //N04790//

PASS TO OFFICE CODES:

VMM TWO SIX FIVE//CO/AMO//

INFO FLTREADCEN EAST CHERRY POINT NC//V22FST.1//

COMNAVAIRFOR PAC ALD

CG FIRST MAW ALD

MAG THREE SIX//ADJ//

MALS THREE SIX//AMO//

COMNAVAIRLANT NORFOLK VA//N421H1//

MSGID/GENADMIN, USMTE, 2008/COMNAVAIRFOR SAN DIEGO CA//

SUBJ/MV-22 MLG FIRE SUPPRESSION BOTTLE DEVIATION REQUEST

AUTHORIZATION ON BUNO 168027.//

REF/A/MSGID:GENADMIN/1ST MAW/200544ZJAN 16.//

REF/B/MSGID:GENADMIN/VMM-265/150657ZJAN 16.//

REF/C/DESC:DOC/EMAIL AND PHONCON/COMNAVAIRFOR/YMD:

20160115.//

NARR/REF A AND B ARE 1ST MAW AND VMM-265 DEFERRAL

REQUESTS, REF C IS EMAIL AND PHONECON AND EMAIL BTWN

(b) (CNAF) AND (b)(6)(b) (V-22 FST)

PROVIDING ENGINEERING CONCURRENCE FOR A MAINTENANCE

DEFERRAL UNTIL MORE ASSETS ARE DELIVERED FROM THE SUPPLY

SYSTEM.//

POC (b) (V-22 CLASS DESK/UNIT:COMNAVAIRFOR/

NAME:NORFOLK VA/ TEL: (b)(6)(b)(3) 10 /EMAIL: (b)(6)(b)(3)

10 U.S.

GENTEXT/REMARKS/1. THIS IS A COORDINATED COMNAVAIRLANT
/COMNAVAIRPAC MESSAGE.

2. AIRCRAFT 168027 HAS A DEPLETED MLG FIRE SUPPRESSION
BOTTLE DUE TO A LEAKING VALVE CORE ON THE NITROGEN
RESUPPLY VALVE.

3. AUTHORIZATION TO CONTINUE OPERATIONS WITH THE DEPLETED
FIRE BOTTLE INSTALLED ON THE BELOW AIRCRAFT UNTIL MORE
ASSETS ARE DELIVERED FROM THE SUPPLY SYSTEM HAS BEEN GRANTED
READ IN FIVE COLUMNS:

| | | | |
|-----------------|--------|-------------|--------|
| NOMENCLATURE | BUNO | NIIN | PART |
| MLG FIRE BOTTLE | 168027 | 01-629-5992 | 918000 |

LENGTH OF REQUEST UNTIL SUPPLY ASSETS ARE AVAILABLE.

4. MAINTAIN COPY OF THIS MSG WITH AC LOGBOOK.//

UNCLAS

MV-22B MAINT DEFERRAL ON BUNO 168027 FOR THE CORROSION ON THE

Originator: COMNAVAIRFOR SAN DIEGO CA

DTG: 220616Z Sep 16 Precedence: P DAC: General

To: VMM TWO SIX FIVE

CC: CG FIRST MAW, MAG THREE SIX, MALS THREE SIX

PAAUZYUW RUOISTA4700 2661327-UUUU--RUJDAAA.

ZNR UUUUU

P 220616Z SEP 16 ZYB

FM COMNAVAIRFOR SAN DIEGO CA

TO RUJDAAA/VMM TWO SIX FIVE

INFO RUJDAAA/CG FIRST MAW

RUJDAAA/MAG THREE SIX

RUJDAAA/MALS THREE SIX

ZEN/FLTREADCEN EAST CHERRY POINT NC

ZEN/COMNAVAIRFOR SAN DIEGO CA

ZEN/COMNAVAILANT NORFOLK VA

BT

UNCLAS

PASS TO OFFICE CODES:

VMM TWO SIX FIVE//CO/AMO//

INFO CG FIRST MAW

MAG THREE SIX//ADJ//

MALS THREE SIX//AMO//

FLTREADCEN EAST CHERRY POINT NC//V22FST.1//

COMNAVAIRFOR SAN DIEGO CA//N421H1//

MSGID/GENADMIN,USMTF,2008/COMNAVAIRFOR SAN DIEGO CA//

SUBJ/MV-22B MAINT DEFERRAL ON BUNO 168027 FOR THE CORROSION ON THE

RH AFT SPONSON FAIRING SUPPORT APPROVAL.//

REF/A/MSG/1ST MAW/220348Z SEP 16.//

REF/B/MSG/VMM-265/210509Z SEP 16.//

REF/C/EMAIL:20 SEP16.//

REF/D/DOC/TECH ASSIST MANAGEMENT PROGRAM.//

AMPN/REF A IS MAINT DEFERRAL REQUEST CONCURRENCE FROM 1ST MAW. REF B IS

MAINT DEFERRAL REQUEST FROM VMM-265. REF C IS EMAIL BETWEEN (b)(6) (b)(3) 10

(b)(6) (b)(3) 10 CNAF) AND (b)(6) (b)(3) 10 (FST ENGINEERING) GETTING CONCURRENCE (b)(6) (b)(3) 10 U.S. Code §

MAINT DEFERRAL. REF D IS TAR # 031140.//

(b)(6) (b)(3) 10 U.S. Code /V-22 CLASS DESK/UNIT:COMNAVAIRFOR/NAME:
NORFOLK VA /TEL: (b)(6) (b)(3) 10 U.S. Code § 130b

(b)(6) (b)(3) //

GENTEXT/REMARKS/1. THIS IS A COORDINATED COMNAVAILANT/
COMNAVAILPAC MESSAGE.2. IAW REFS A THRU D, AUTHGRA TO DEFER MAINTENANCE ON BUNO 168027
FOR THE CORROSION ON THE RH AFT SPONSON FAIRING SUPPORT TO BE
REPAIRED

NLT NEXT PHASE.//

BT

#4700

09A4

Turnaround Maint. Records for MODEX 06 /BUNO 168027

Received Date: 12 DEC 2016 2321

Completion Date: 12 DEC 2016 2336

Maint Cntl Sig: (b)(6) (b)(3) 10
U S Code §

| | Wc Cd | Tool Box # | Discrepancy | Corrected | Worker Signature |
|----|-------|------------|-------------|--------------------------|---|
| 1 | 310 | 6-7 | NONE | <input type="checkbox"/> | (b)(6) (b)(3) 10 U.S. Code § 130b |
| 10 | 310 | 6-7 | | <input type="checkbox"/> | |
| 11 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12 | 310 | 6-7 | | <input type="checkbox"/> | |
| 13 | 310 | 6-7 | | <input type="checkbox"/> | |
| 14 | 310 | 6-7 | | <input type="checkbox"/> | |
| 15 | 310 | 6-7 | | <input type="checkbox"/> | |
| 16 | 310 | 6-7 | | <input type="checkbox"/> | |
| 17 | 310 | 6-7 | | <input type="checkbox"/> | |
| 2 | 310 | 6-7 | | <input type="checkbox"/> | |
| 3 | 310 | 6-7 | | <input type="checkbox"/> | |
| 4 | 310 | 6-7 | | <input type="checkbox"/> | |
| 5 | 310 | 6-7 | | <input type="checkbox"/> | |
| 6 | 310 | 6-7 | | <input type="checkbox"/> | |
| 7 | 310 | 6-7 | | <input type="checkbox"/> | |
| 8 | 310 | 6-7 | | <input type="checkbox"/> | |
| | 310 | 6-7 | NONE | <input type="checkbox"/> | |

Daily Maint. Records for MODEX 06 /BUNO 168027

Received Date: 12 DEC 2016 2321

Completion Date: 12 DEC 2016 2336

Maint Cntl Sig: (b)(6) (b)(3) 10

U.S. Code §

| | Wc Cd | Tool Box # | Discrepancy | Corrected | Worker Signature |
|-------|-------|------------|-------------|--------------------------|--------------------------------------|
| 10 | 310 | 6-7 | NONE | <input type="checkbox"/> | (b)(6) (b)(3) 10 U.S. Code § 130b |
| 11 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.1 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.10 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.2 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.3 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.4 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.5 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.6 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.7 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.8 | 310 | 6-7 | | <input type="checkbox"/> | |
| 12.9 | 310 | 6-7 | | <input type="checkbox"/> | |
| 13 | 310 | 6-7 | | <input type="checkbox"/> | |
| 13.1 | 310 | 6-7 | | <input type="checkbox"/> | |
| 13.10 | 310 | 6-7 | | <input type="checkbox"/> | |
| 13.2 | 310 | 6-7 | | <input type="checkbox"/> | |
| 13.3 | 310 | 6-7 | | <input type="checkbox"/> | |

| EX | BUNO/Serno | Assy Cd | Position Code | Task Name | Location | Interval | When Due Date | Units | Current | Remaining |
|-----------|------------|---------|---------------|-----------------------------------|----------|----------|---------------|----------|----------|-----------|
| 168027 | AYNE | | | 56 DAY INSPECTION | PRIMARY | 56 Day | 22 DEC 2016 | | | 10 ✓ |
| | AYNE | | | 91 DAY INSPECTION | PRIMARY | 91 Day | 04 JAN 2017 | | | 23 ✓ |
| 7575 | AYNE | | | 180 DAY INSPECTION - IFF RCVR/XMT | PRIMARY | 180 Day | 05 APR 2017 | | | 114 ✓ |
| 06 | AYNE | | | NON RECHARGE BATTERY- DEL 8 DEC | PRIMARY | 180 Day | 22 APR 2017 | | | 131 ✓ |
| EN0014055 | AYNE | | | CABIN EMERGENCY EQUIPMENT INSP | PRIMARY | 182 Day | 25 DEC 2016 | | | 13 ✓ |
| EN0014071 | AYNE | | | CABIN EMERGENCY EQUIPMENT INSP | PRIMARY | 182 Day | 25 DEC 2016 | | | 13 ✓ |
| 06 | AYNE | | | CABIN EMERGENCY EQUIPMENT INSP | PRIMARY | 364 Day | 19 SEP 2017 | | | 281 ✓ |
| NP51303 | AYNE | | | UNDERWATER ACOUSTIC BEACON TEST | PRIMARY | 364 Day | 30 NOV 2017 | | | 353 ✓ |
| 168027 | AYNE | | | COMPASS CALIBRATION | PRIMARY | 365 Day | 22 MAR 2017 | | | 100 ✓ |
| | AYNE | | | 35 FLIGHT HOUR INSPECTION | PRIMARY | 35 Hour | | 1046.400 | 1035.300 | 11.100 |
| A-1331 | AYNE | | | 35 HOUR INSPECTION. | PRIMARY | 35 Hour | | 807.000 | 795.900 | 11.100 |
| A-2110 | AYNE | | | 35 HOUR INSPECTION. | PRIMARY | 35 Hour | | 765.400 | 754.300 | 11.100 |
| A-1552 | AYNE | | | 35 HOUR INSPECTION. | PRIMARY | 35 Hour | | 975.000 | 963.900 | 11.100 |
| A-1074 | AYNE | | | 35 HOUR INSPECTION. | PRIMARY | 35 Hour | | 896.500 | 885.400 | 11.100 |
| A-1349 | AYNE | | | 35 HOUR INSPECTION. | PRIMARY | 35 Hour | | 1046.400 | 1035.300 | 11.100 |
| A-1481 | AYNE | | | 35 HOUR INSPECTION. | PRIMARY | 35 Hour | | 1046.400 | 1035.300 | 11.100 |
| CAE130414 | T1B | 1 | | 35 HOUR ENGINE INSP (AUSTERE ONI | PRIMARY | 35 Hour | | 1046.400 | 1035.300 | 11.100 ✓ |
| CAE130076 | T1B | 1 | | 35 HOUR ENGINE INSP (AUSTERE ONI | PRIMARY | 35 Hour | | 1949.300 | 1938.200 | 11.100 ✓ |
| 168027 | AYNE | | | 70 FLIGHT HOUR INSPECTION | PRIMARY | 70 Hour | | 1046.100 | 1035.300 | 10.800 |
| A-1074 | AYNE | | | 70 HOUR BLADE ROOT FOR CRACKS II | PRIMARY | 70 Hour | | 896.200 | 885.400 | 10.800 |
| A-2110 | AYNE | | | 70 HOUR BLADE ROOT FOR CRACKS II | PRIMARY | 70 Hour | | 765.100 | 754.300 | 10.800 ✓ |
| A-1481 | AYNE | | | 70 HOUR BLADE ROOT FOR CRACKS II | PRIMARY | 70 Hour | | 1046.100 | 1035.300 | 10.800 |
| A-1331 | AYNE | | | 70 HOUR BLADE ROOT FOR CRACKS II | PRIMARY | 70 Hour | | 806.700 | 795.900 | 10.800 |
| A-1349 | AYNE | | | 70 HOUR BLADE ROOT FOR CRACKS II | PRIMARY | 70 Hour | | 1046.100 | 1035.300 | 10.800 |
| A-1552 | AYNE | | | 70 HOUR BLADE ROOT FOR CRACKS II | PRIMARY | 70 Hour | | 974.700 | 963.900 | 10.800 |
| CAE130414 | T1B | 1 | | 70 FLIGHT HOUR INSPECTION | PRIMARY | 70 Hour | | 1046.100 | 1035.300 | 10.800 ✓ |
| CAE130076 | T1B | 1 | | 70 FLIGHT HOUR INSPECTION | PRIMARY | 70 Hour | | 1949.000 | 1938.200 | 10.800 ✓ |
| CAE130414 | T1B | 1 | | 70 HOUR POWER ASSURANCE | PRIMARY | 70 Hour | | 1046.100 | 1035.300 | 10.800 ✓ |
| CAE130076 | T1B | 1 | | 70 HOUR POWER ASSURANCE | PRIMARY | 70 Hour | | 1949.000 | 1938.200 | 10.800 ✓ |
| 168027 | AYNE | | | 140 FLIGHT HOUR INSPECTION | PRIMARY | 140 Hour | | 1094.600 | 1035.300 | 59.300 ✓ |

ORG : G
ORG Name : V
Aircraft Data: MODEX

NALCOMIS A
SCHEDULED INSPECTIONS REPORT
12 DEC 2015 - 12 DEC 2017

DATE: 12 DEC 2016

TIME: 2330

REQ BY: (b)(6) (b)(3) 10

PAGE: 2 of 2

| MODEX | BUNO/Serno | Assy Cd | Position Code | Task Name | Location | Interval | When Due Date | Units | Current | Remaining |
|-------|------------|------------|---------------|-------------------------------------|----------|-----------|------------------|----------|----------|-----------|
| 06 | 168027 | AYNE | | 210 FLIGHT HOUR INSPECTION | PRIMARY | 210 Hour | | 1045.200 | 1035.300 | 9.900 ✓ |
| | | AYNE | | PHASE A INSPECTION | PRIMARY | 280 Hour | | 1115.200 | 1035.300 | 79.900 |
| | A-1285 | CV2L | | PHASE A INSPECTION | PRIMARY | 280 Hour | | 1097.200 | 1035.300 | 61.900 |
| | A-1277 | CV2R | | PHASE A INSPECTION | PRIMARY | 280 Hour | | 1097.200 | 1035.300 | 61.900 |
| | CAE130414 | T1B | 1 | PHASE A ENGINE INSPECTION | PRIMARY | 280 Hour | | 1115.200 | 1035.300 | 79.900 |
| | CAE130076 | T1B | 1 | PHASE A ENGINE INSPECTION | PRIMARY | 280 Hour | | 2018.100 | 1938.200 | 79.900 |
| | CAE130414 | T1B | 1 | 1680 ENGINE INSP - 053A05 | PRIMARY | 1680 Hour | | 1680.000 | 1035.300 | 644.700 |
| | CAE130076 | T1B | 1 | 1680 ENGINE INSP - 053A05 | PRIMARY | 1680 Hour | | 2740.700 | 1938.200 | 802.500 |
| | CAE130414 | T1B | 1 | 2520 ENGINE INSPECTION - UNS 053A1 | PRIMARY | 2520 Hour | | 2520.000 | 1035.300 | 1484.700 |
| | CAE130076 | T1B | 1 | 2520 ENGINE INSPECTION - UNS 053A1 | PRIMARY | 2520 Hour | | 3580.700 | 1938.200 | 1642.500 |
| | BEC-0029 | AYNE | | 4200 HR EDDY CURRENT INSP | PRIMARY | 4200 Hour | | 5113.800 | 1035.300 | 4078.500 |
| | CAE130414 | T1B | 1 | 4200 HR ENGINE INSPECTION - UNS 05: | PRIMARY | 4200 Hour | | 4200.000 | 1035.300 | 3164.700 |
| | CAE130076 | T1B | 1 | 4200 HR ENGINE INSPECTION - UNS 05: | PRIMARY | 4200 Hour | | 5260.700 | 1938.200 | 3322.500 |
| | 168027 | AYNE | | 4315 FLIGHT HOUR INSPECTION | PRIMARY | 4315 Hour | | 4315.000 | 1035.300 | 3279.700 |
| | CAE130414 | T1B | 1 | 6720 HR ENGINE INSPECTION - UNS 05 | PRIMARY | 6720 Hour | | 6720.000 | 1035.300 | 5684.700 |
| | CAE130076 | T1B | 1 | 6720 HR ENGINE INSPECTION - UNS 05 | PRIMARY | 6720 Hour | | 7780.700 | 1938.200 | 5842.500 |
| | 168027 | AYNE | | 1000 LANDING INSPECTION | PRIMARY | 1000 Lndg | | 3000.000 | 2422.000 | 578.000 ✓ |

NALCOMI-1A

AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 12 DEC 2016

TIME : 2331

REQ BY: (b)(6) (b)(3) 10

PAGE : 1 of 3

| Work Center | Assy Cd | BUNO/ MODEX | Serno | Maint Level | MCN | JCN | Acft/ Equip Stat | Job Stat | EOC | WUC/UNS | System Reason | DDSN | Proj Code | Supply Status | Received Date |
|-------------|---------|-------------|--------|-------------|---------|-----------|------------------|----------|-----|----------|--------------------------|----------|--------------|---------------|---------------|
| 021 | AYNE | 06 | 168027 | 1 | 20MBMBK | GH5084314 | U | M3 | | 1000000 | AFC-0192 NLT B PHASE | | | | |
| | | | | | 20MBN1O | GH5094388 | U | M3 | | 1000000 | AFC-0193 NLT D PHASE | | | | |
| | | | | | 20MBN1Z | GH5094399 | U | M3 | | 1000000 | AFC-0195 NLT 28 FEB 2016 | | | | |
| | | | | | 20MBR2F | GH5158305 | U | M3 | | 1000000 | AFB-0175 NLT A PHASE | | | | |
| | | | | | 20MBR9M | GH5161512 | U | M3 | | 1000000 | AFC-0206 NLT 31 OCT 2021 | | | | |
| | | | | 3 | 20MBTGR | GH5203390 | U | WP | | 1000000 | AFC-0188 NLT 31 AUG 2021 | 63416073 | AK1 341CANCL | | 06 DEC 2016 |
| | | | | | | | U | WP | | 1000000 | AFC-0188 NLT 31 AUG 2021 | 63416088 | ZO9 341BDN52 | | |
| | | | | 1 | 20MBV9O | GH5257313 | U | M3 | | 1000000 | AFC-0230 NLT A PHASE | | | | |
| | | | | | 20MB7MF | GH5258428 | U | M3 | | 1000000 | AFC-0167 NLT 30 NOV 2011 | | | | |
| | | | | | 20MAP2O | GH5259506 | U | M3 | | 1000000 | AFC-0185 NLT 30 APR 2020 | | | | |
| | | | | | 20MBW5G | GH5291067 | U | M3 | | 934201 | CSC-0174 NLT 31 DEC 2011 | | | | |
| | | | | | 20MBWJ0 | GH5299478 | U | M3 | | 345501 | CSC-0173 NLT 31 DEC 2021 | | | | |
| | | | | 3 | 20MBWZS | GH5310374 | U | WP | | 1000000 | AFC-0155 NLT TYCOM DIR | 63416003 | ZO9 341BDN52 | | |
| | | | | 1 | 20MBXZK | GH5340309 | U | WP | | 934201 | AVC-5831 NLT 31 DEC 2011 | 63416062 | AK1 341CANCL | | 06 DEC 2016 |
| | | | | | | | U | WP | | 934201 | AVC-5831 NLT 31 DEC 2011 | 63416090 | ZO9 341BDN52 | | |
| 120 | AYNE | 06 | 168027 | 1 | 20MBJ0F | GH5042096 | U | M8 | | 54226506 | 6RI7B DELAM | | | | |
| | | | | | 20MBLPJ | GH5073329 | U | WP | | 263402 | RH MLG FIRE BOTTLE | 62076005 | AK1 256CANCL | | 12 SEP 2016 |
| | | | | | | | U | WP | | 263402 | RH MLG FIRE BOTTLE | 62076007 | AK1 208COMPL | | 26 JUL 2016 |
| | | | | | | | U | WP | | 263402 | RH MLG FIRE BOTTLE | 63066045 | AK1 310BBNRP | | |
| | | | | | | | U | WP | | 263402 | RH MLG FIRE BOTTLE | 62426076 | AK1 242COMPL | | 29 AUG 2016 |
| | | | | | 20MBNB5 | GH5096080 | U | M3 | | 78511053 | LH LWR AFT NACELLE STF | | | | |
| | | | | | 20MAXP8 | GH5107335 | U | M3 | | 275003 | LHOBIB FLAP ACT BRACKI | 61436099 | AK1 143COMPL | | 22 MAY 2016 |
| | | | | | 20MBQVC | GH5154089 | U | M3 | | 561005 | LH OVERHEAD WINDOW | | | | |

NALCOMI AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 12 DEC 2016
TIME : 2331
REQ BY : (b)(6) (b)(3)
PAGE : 2 of 3

| Work Center | Assy Cd | BUNO/ MODEX | Serno | Maint Level | MCN | JCN | Acft/ Equip Stat | Job Stat | EOC | WUC/UNS | System Reason | DDSN | Proj Code | Supply Status | Received Date |
|----------------|------------|----------------|--------|----------------|---------|-----------|------------------------|-------------|-----|------------|------------------------|----------|--------------|------------------|------------------|
| 120 | AYNE | 06 | 168027 | 1 | 20MBM2 | GH5182104 | P | M3 | H | 324010 | LH BRAKES | | | | |
| | | | | | 20MBVCZ | GH5260394 | U | M8 | | 53117507 | CORROSION APR 39 | | | | |
| | | | | | 20MBWJR | GH5299505 | U | M3 | | 532449 | 2RT3 LATCH | 63436029 | AK1 | 343COMPL | 08 DEC 2016 |
| | | | | | | | U | M3 | | 532449 | 2RT3 LATCH | 63226063 | AK1 | 323COMPL | 18 NOV 2016 |
| | | | | | | | U | M3 | | 532449 | 2RT3 LATCH | 63226077 | AK1 | 322COMPL | 18 NOV 2016 |
| | | | | | | | U | M3 | | 532449 | 2RT3 LATCH | 63226078 | AK1 | 334COMPL | 29 NOV 2016 |
| | | | | | | | U | M3 | | 532449 | 2RT3 LATCH | 63226079 | AK1 | 323COMPL | 18 NOV 2016 |
| | | | | | 20MBXFP | GH5322272 | U | M3 | | 542224 | 6RB2 WORN HARDWARE | 63226072 | AK1 | 323COMPL | 18 NOV 2016 |
| | | | | | | | U | M3 | | 542224 | 6RB2 WORN HARDWARE | 63226073 | AK1 | 334COMPL | 29 NOV 2016 |
| | | | | | | | U | M3 | | 542224 | 6RB2 WORN HARDWARE | 63226074 | AK1 | 323COMPL | 18 NOV 2016 |
| | | | | | | | U | M3 | | 542224 | 6RB2 WORN HARDWARE | 63226075 | AK1 | 323COMPL | 18 NOV 2016 |
| | | | | | 20MBXTF | GH5336105 | U | M3 | | 78510101 | LH NACELLE UPPER ST W | | | | |
| | | | | | 20MBXTG | GH5336106 | U | M3 | | 324001 | LEFT HAND BRAKE HOSE | | | | |
| | | | | | 20MBXZY | GH5340329 | U | M3 | | 5542 | RIGHT RUDDER BONDING | | | | |
| 12C | AYNE | 06 | 168027 | 1 | 20MBWR0 | GH5305119 | U | M3 | | 621101 | LH RED RAIN EROSION | | | | |
| | | | | | 20MBWR2 | GH5305121 | U | M3 | | 621101 | LH RED TIP LIGHT SHIMS | | | | |
| | | | | | 20MBWR3 | GH5305122 | U | M3 | | 621202 | RH RED SPAR SCREWS | | | | |
| | | | | | 20MBWR6 | GH5305125 | U | M3 | | 621204 | RH GRN PAINT | | | | |
| | | | | | 20MBXM1 | GH5327473 | U | M3 | | 5510 | CCDD:20DEC16 LH HOR S | | | | |
| | | | | | 20MBXN2 | GH5328501 | U | M3 | | 621202 | RH RED BLADE BARRIER | | | | |
| | | | | | 20MBXMZ | GH5328502 | U | M3 | | 621103 | LH GREEN BLADE ERROD | | | | |
| 200 | AYNE | 06 | 168027 | 1 | 20MBGU4 | GH5012416 | U | M3 | | 6321130107 | LH TORQUE SENS #1 | | | | |
| | | | | | 20MBHVH | GH5026218 | U | WP | | 6221073307 | RH RED FLAPPING 3 | 60846025 | AK1 | 112CANCL | 21 APR 2016 |

AIRCRAFT/EQUIPMENT WORKLOAD REPORT

DATE : 12 DEC 2016

TIME : 2331

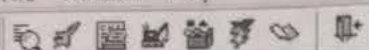
REQ BY: (b)(6) (b)(3)

PAGE : 3 of 3

| Work Center | Assy Cd | MODEX | BUNO/ Serno | Maint Level | MCN | JCN | Acft/ Equip Stat | Job Stat | EOC | WUC/UNS | System Reason | DDSN | Proj Code | Supply Status | Received Date |
|-------------|---------|-------|-------------|-------------|---------------------|-----------|------------------|----------|-----|------------|------------------------|----------|-----------|---------------|---------------|
| 200 | AYNE | 06 | 168027 | 1 | 20MBHVH | GH5026218 | U | WP | | 6221073307 | RH RED FLAPPING 3 | 62886049 | AK1 | 306BBSMS | |
| | | | | | 20MBL RX | GH5074403 | P | M3 | I | 306101 | LH PROPROTOR DEICE FE | | | | |
| | | | | | 20MBL RY | GH5074404 | P | M3 | I | 306101 | L/R BLADE TEMP SENSOR | | | | |
| | | | | | 20MBVJM | GH5265590 | U | M3 | | 2862 | GRDP VFG | | | | |
| | | | | | 20MBW18 | GH5287541 | U | M3 | | 4210HZ | W617 | 62876028 | AK1 | 299COMPL | 28 OCT 2016 |
| | | | | | | | U | M3 | | 4210HZ | W617 | 62876029 | AK1 | 287COMPL | 13 OCT 2016 |
| | | | | | 20MBWQZ | GH5305118 | U | M3 | | 621103 | LH GRN TIP LIGHT SHIMS | 63236091 | AK1 | 328CANCL | 21 NOV 2016 |
| | | | | | | | U | M3 | | 621103 | LH GRN TIP LIGHT SHIMS | 63136097 | AK1 | 313COMPL | 08 NOV 2016 |
| | | | | | 20MBWR7 | GH5305126 | U | M3 | | 621204 | RH GRN RIP LIGHT SHIMS | 63136099 | AK1 | 313COMPL | 08 NOV 2016 |
| 310 | AYNE | 06 | 168027 | 1 | 20MBUM7 | GH5238273 | U | WP | | 71960208 | R/H WATER WASH LINE | 62386041 | AK1 | 245COMPL | 07 SEP 2016 |
| | | | | | | | U | WP | | 71960208 | R/H WATER WASH LINE | 62866098 | AK1 | 292BZSMS | |
| | | | | | 20MBYJF | GH5347309 | U | M3 | | 785101 | (L/H) D/T PANEL R&R | | | | |
| | | | | | 20MBYJG | GH5347310 | U | M3 | | 785202 | (R/H) D/T PANEL R&R | | | | |

FOR MODEX: 06 ** Work Orders: 43 AWP: 6 AWM: 37 IW: 0 RQN's: 28 **

*** TOTAL Work Orders: 43 TOTAL AWP: 6 TOTAL AWM: 37 TOTAL IW: 0 TOTAL RQN'S: 28 ***



Automated Aircraft Discrepancy Book

ORG: BUNO: TMS: Next Phase: Up/Down/Partial:
 MODEX: Assy Cd: Basic Wgt: Acft Hours: Last Flown:

Engine/APU/Prop Data | Open Work Orders | Awaiting Maintenance Control Approval | Closed Work Orders Last 10 Flights
 Acceptance For Flight | Consumption | Inspections Near Due | Removals Near Due | Summary



| | | | | | |
|--|---|---|----------------------|--|--|
| Oxy Qty <input type="text" value="1,800.00"/> | Fuel Grade: <input type="text" value="JP5"/> Fuel Qty: <input type="text" value="11,400.00"/> | Oil Grade | Oz. Of Oil Added | Multiplier | Description |
| Hot Seat Ind: <input type="text" value="YES"/> | | | | | |
| Ordinance: <input type="text" value="NO AAE INSTALLED. QASO (b)(6) (b)"/> | Special Equipment: <input type="text" value="NO ENGINE SERVICING REQUIRED. A/C CONFIGURE STATIONS."/> | | | | |
| Limitations: <input type="text" value="THE FOLLOWING EOC CODES APPLY; (H) (I) (H) LH BRAKES, (I) LH PRPRTR DEICE (I) LH RED BLADE"/> | | | | | Pilot Signature: <input type="text" value="13 DEC 2016"/> |
| I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on a work order. | | Certification of safe for flight condition by MMCO, MO or MCO. If authorized, other persons may sign. | | | I've reviewed discrepancy reports flights, insured wgt. and balance accept this aircraft for flight. |
| Signatures: | Plane Captain: <input type="text"/> | Safe for Flight: <input type="text" value="(b)(6) (b)(3)"/> | | Pilot: <input type="text" value="(b)(6) (b)"/> | |
| A-Sheet | Daily Maint. Record | Turnaround Maint. Record | Aircraft Limitations | Daily/Turnaround - Local Card Reference | Last 10 A-Sheets |

16348

13 DEC 16

HR

LD

4.0

14

GH50TG5

NAVAL AIRCRAFT FLIGHT RECORD

AIRCRAFT DATA (RECORD TYPE 7B)

| SIDE | EXC | BUNO | TEC | ORG | MSN1 | HR51 | MSN2 | HR52 | MSN3 | HR53 | SUPT | TTLFLT | CAT | AIRLIFT | REC | ENG1 | ENG2 | ENG3 | ENG4 | HOIST |
|--------------------------------------|-----|--------|------|-----|------|------|------|------|------|------|------|--------|-----|---------|-----|------------|------|------|------|-------|
| 06 | | 168027 | AYNE | GH5 | 2M4 | 4.0 | | | | | FP | 5 | 1 | 0 | | 4.0 | 4.0 | | | |
| TOTAL MISSION REQUIREMENT (TMR) DATA | | | | | | | | | | | | | | | | ENGINE HRS | | | | |

AIRCREW DATA (RECORD TYPE 7C; IF EXC CODE = G, L, OR R; RECORD TYPE = 7D)

| LINE | EXC CODE | FIRST INT | NAME | SSN/DOD ID | SPL QUAL | FLIGHT TIME | | | INSTRUMENT | | NIGHT TIME | LANDINGS | | | | APPROACHES | | | | TRAINING CODES | | |
|-----------------------------------|----------|-----------|-----------------------------------|------------|----------|-------------|-----|-----|------------|-----|------------|----------|---|---|---|------------|---|---|---|----------------|------|------|
| | | | | | | FPT | CPT | SCT | ACT | SIM | | T | N | T | N | T | N | T | N | 1ST | 2ND | 3RD |
| (b)(6) (b)(3) 10 U.S. Code § 130b | | | (b)(6) (b)(3) 10 U.S. Code § 130b | | A | 3 | 2.0 | 2.0 | 0.1 | 0.8 | | 6 | 7 | | | | | | | 2135 | 3330 | 6240 |
| | | | | | C | 3 | 2.0 | 2.0 | 0.1 | 0.8 | | 6 | 7 | | | | | | | 2135 | 3330 | |
| | | | | | F | M | | | | | | | | | | | | | | 2135 | 3330 | |
| | | | | | F | M | | | | | | | | | | | | | | 2135 | 3330 | |

LOGISTICS DATA (DEPART - RECORD TYPE 7E; ARRIVE - RECORD TYPE 7F)

| LINE | EXC CODE | TIME ZONE | TIME | DATE (JULIAN) | ICAO OR SHIP I.D. | S | DISTANCE | DELAY | | CONFIRMED PAYLOAD | | | | | OPPORTUNE PAYLOAD | | CONFIG DATA | |
|------|----------|-----------|------|---------------|-------------------|---|----------|-------|-----|-------------------|-------|-------|-------|-------|-------------------|---------|-------------|-----------------|
| | | | | | | | | 1ST | 2ND | PRI 1 | PRI 2 | PRI 3 | PRI 4 | PRI 5 | CARGO (LBS) | PAX NO. | MAX PAX | MAX CARGO (LBS) |
| 1 | | I | 1200 | 16348 | ROTM | | | | | | | | | | 0 | 1 | 500 | 50000 |
| | | | 1350 | 16348 | ROTM | F | | | | | | | | | | | | |
| 2 | | I | 1351 | 16348 | ROTM | | | | | | | | | | 0 | 6 | 500 | 50000 |
| | | | 1410 | 16348 | ROTM | F | | | | | | | | | | | | |
| 3 | | I | 1411 | 16348 | ROTM | | | | | | | | | | 0 | 1 | 500 | 50000 |
| | | | 1420 | 16348 | ROTM | F | | | | | | | | | | | | |
| 4 | | I | 1500 | 16348 | ROTM | | | | | | | | | | 0 | 5 | 500 | 50000 |
| | | | 1600 | 16348 | ROTM | F | | | | | | | | | | | | |
| 5 | | I | 1620 | 16348 | ROTM | | | | | | | | | | 0 | | 500 | 50000 |
| | | | 1700 | 16348 | ROTM | F | | | | | | | | | | | | |

WEAPONS PROFICIENCY DATA (RECORD TYPE 7G)

| LINE | EXC CODE | LINE NO. | TRAINING AREA DATA | | DELIVERY DATA 1 | | | | DELIVERY DATA 2 | | | | DELIVERY DATA 3 | | | | MISC DATA 1 | | MISC DATA 2 | |
|------|----------|----------|--------------------|-------|-----------------|-------|-------|-------|-----------------|---------|-------|-------|-----------------|---------|-------|-------|-------------|---------|-------------|--------|
| | | | TRAINING AREA 1 | HRS 1 | TRAINING AREA 2 | HRS 2 | ORD 1 | DEL 1 | RUNS 1 | SCORE 1 | ORD 2 | DEL 2 | RUNS 2 | SCORE 2 | ORD 3 | DEL 3 | RUNS 3 | SCORE 3 | CD 1 | DATA 2 |
| 1 | | 1 | | | | | | | | | | | | | | | | | | |
| 2 | | 2 | | | | | | | | | | | | | | | | | | |
| 3 | | 3 | | | | | | | | | | | | | | | | | | |
| 4 | | 4 | | | | | | | | | | | | | | | | | | |

(REMARKS)

(b)(6) (b)(3) 10 U.S. Code § 130b

NAME/GRADE/LOCAL USE 1

| A | B | C | D | E | F | G | H | A | B | C | D | E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |

RAYOPS

MEDICAL

INSTRUMENT

WATER

PSYCHOLOGY

(b)(6) (b)(3) 10 U.S. Code § 130b

File Window Help



ORG: BUNO: TMS: Next Phase: Up/Down/Partial:
 MODEX: Assy Cd: Basic Wgt: Acft Hours: Last Flown:
 Engine/APU/Prop Data | Open Work Orders | Awaiting Maintenance Control Approval | Closed Work Orders Last 10 Flights
 Acceptance For Flight | Consumption | Inspections Near Due | Removals Near Due | Summary



Refresh

| Oxy Qty | Fuel Grade: <input type="text" value="JPS"/> | Oil Grade | Oz. Of Oil Added | Multiplier | Description |
|---------------------------------------|--|-----------|------------------|------------|--|
| <input type="text" value="1,800.00"/> | Fuel Qty: <input type="text" value="11,500.00"/> | 23699 | 0.0 | 1.0 | ENGINE, AIRCRAFT TURBINE - CAE130076 (2) |
| | | 23699 | 0.0 | 1.0 | ENGINE, AIRCRAFT TURBINE - CAE130414 (1) |

Hot Seat Ind:

Ordinance:

Special Equipment: LH/RH ENG NO SERVICING REQUIRED. FIVE LITERS INSTALLED.

 Limitations: THE FOLLOWING EOC CODES APPLY: (H) (I)
 (H) LH BRAKES, (I) LH PRPRTR DEICE (I) LH RED BLADE

Pilot Signature D:

00 000

I have personally inspected this aircraft IAW the applicable MRCs/checklists. Any discrepancies noted have been entered on a work order.

Certification of safe for flight condition by MMCO, MO or MCO. If authorized, other persons may sign.

I've reviewed discrepancy reports of flights, insured wgt. and balance and accept this aircraft for flight.

Signatures: Plane Captain: (b)(6) (b)(3)

Safe for Flight: (b)(6) (b)(3) 10

 (b)(6) (b)(3) 10 U.S.
 Code § 130b

A-Sheet | Daily Maint. Record | Turnaround Maint. Record | Aircraft Limitations | Daily/Turnaround - Local Card Reference | Last 10 A-Sheets

 (b)(6) (b)(3) 10 U.S.
 Code § 130b

13 DEC 16

3.0

7

16348

HR

LD

GH50TFZ

NAVAL AIRCRAFT FLIGHT RECORD

AIRCRAFT DATA (RECORD TYPE 7B)

| SIDE | EXC | BUNO | TEC | ORG | MSN1 | HRS1 | MSN2 | HRS2 | MSN3 | HRS3 | SUPT | TTLFLT | P | CAT | AIRLIFT | REC | ENG1 | ENG2 | ENG3 | ENG4 | HOIST |
|--------------------------------------|-----|--------|------|-----|------|------|------|------|------|------|------|--------|---|-----|---------|-----|------------|------|------|------|-------|
| 06 | | 168027 | AYNE | GH5 | 1A1 | 3.0 | | | | | FP | 1 | 1 | 0 | | | 3.0 | 3.0 | | | |
| TOTAL MISSION REQUIREMENT (TMR) DATA | | | | | | | | | | | | | | | | | ENGINE HRS | | | | |

AIRCREW DATA (RECORD TYPE 7C; IF EXC CODE = G, L, OR R; RECORD TYPE = 7D)

| LINE | EXC CODE | FIRST INT | NAME | SSN/DoD ID | SPL QUAL | V/C | FLIGHT TIME | | | INSTRUMENT | | NIGHT TIME | LANDINGS | | | | | APPROACHES | | | | | TRAINING CODES | | |
|------|----------|-----------|--------------------------------------|------------|----------|-----|-------------|-----|-----|------------|-----|------------|----------|---|---|---|---|------------|---|---|---|------|----------------|------|------|
| | | | | | | | FPT | CPT | SCF | ACT | SIM | | T | N | T | N | T | N | T | N | T | N | 1ST | 2ND | 3RD |
| 1 | | | (b)(6) (b)(3) 10 U.S. Code § 130b | | A | 3 | 1.5 | 1.5 | | 0.5 | 1.0 | | 6 | 2 | | | | B | 2 | | | | 2133 | 2135 | 2233 |
| 2 | | | | | C | 3 | 1.5 | 1.5 | | 0.5 | 1.0 | | 6 | 5 | | | | | | | | 2133 | 2135 | 2233 | |
| 3 | | | | | F | M | | | 3.0 | | | | | | | | | | | | | 2133 | 2135 | 2233 | |
| 4 | | | | | F | M | | | 3.0 | | | | | | | | | | | | | 2133 | 2135 | 2233 | |

LOGISTICS DATA (DEPART - RECORD TYPE 7E; ARRIVE - RECORD TYPE 7F)

| | | | | | | | | DELAY | | CONFIRMED PAYLOAD | | | | | OPPORTUNE PAYLOAD | | | CONFIG DATA | | | | | |
|------|----------|-----------|------|---------------|-------------------|---|---|----------|--------|-------------------|--------|-------|---------|---------|-------------------|---------|---------|-------------|---------|-------------|----------|---------|-----------------|
| | | | | | | | | 1ST | 2ND | PRI 1 | PRI 2 | PRI 3 | PRI 4 | PRI 5 | | | | | | | | | |
| LINE | EXC CODE | TIME ZONE | TIME | DATE (JULIAN) | ICAO OR SHIP I.D. | S | S | DISTANCE | O O DE | HRS | O O DE | HRS | PAX NO. | PAX NO. | PAX NO. | PAX NO. | PAX NO. | CARGO (LBS) | PAX NO. | CARGO (LBS) | CODE 1 2 | MAX PAX | MAX CARGO (LBS) |
| 1 | | I | 0830 | 16348 | ROTM | | | | | | | | | | | | | 0 | | | | 500 | 50000 |
| | | | 1130 | 16348 | ROTM | F | | | | | | | | | | | | | | | | | |

WEAPONS PROFICIENCY DATA (RECORD TYPE 7G)

| LINE | EXC CODE | LINE NO. | TRAINING AREA DATA | | | | DELIVERY DATA 1 | | | | DELIVERY DATA 2 | | | | DELIVERY DATA 3 | | | | MISC DATA 1 | | MISC DATA 2 | |
|------|----------|----------|--------------------|-------|-----------------|-------|-----------------|-------|--------|---------|-----------------|-------|--------|---------|-----------------|-------|--------|---------|-------------|--------|-------------|--------|
| | | | TRAINING AREA 1 | HRS 1 | TRAINING AREA 2 | HRS 2 | ORD 1 | DEL 1 | RUNS 1 | SCORE 1 | ORD 2 | DEL 2 | RUNS 2 | SCORE 2 | ORD 3 | DEL 3 | RUNS 3 | SCORE 3 | CD 1 | DATA 1 | CD 2 | DATA 2 |
| 1 | | 1 | | | | | | | | | | | | | | | | | | | | |
| 2 | | 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | 4 | | | | | | | | | | | | | | | | | | | | |

| REMARKS | NAME GRADE (LOCAL USE) | | | | | | | | NAUTICS | | MEDICAL | INSTRUMENT | WATER | PHYSIOLOGY |
|-----------------------------------|------------------------|---|---|---|---|---|---|---|---------|---|---------|------------|-------|------------|
| | A | B | C | D | E | F | G | H | A | B | C | D | E | |
| (b)(6) (b)(3) 10 U.S. Code § 130b | | | | | | | | | | | | | | |

| | |
|-----------------------------------|--|
| (b)(6) (b)(3) 10 U.S. Code § 130b | |
|-----------------------------------|--|

ADB Work Order

| | | | | | | | |
|--------------------|----------------------|-------------------|--|---------------------------------|--|-------------------------------|-------------|
| Work Center 040 | | CF R N | Reqd N | System Reason FOD INSPECTION | | | |
| Assy Cd AYNE | Buno/Serno 168027 | WO Status Cd D | PILOT/INITIATOR (b)(6) (b)(3) 10 U.S. Code § 130b | | | In Process Inspections Yes | Modex 06 |

REPAIR CYCLE

| | DATE | TIME | EOC | | DATE | TIME | EOC | | DATE | TIME |
|----------|-------------|------|-----|---------|-------------|------|-----|-----------|-------------|------|
| RECEIVED | 05 DEC 2016 | 1116 | Z | IN WORK | 05 DEC 2016 | 1431 | Z | COMPLETED | 05 DEC 2016 | 1607 |

DISCREPANCY

COMPLY WITH FOD INSPECTION CONDITIONAL INSPECTION IN ACCORDANCE WITH REFERENCE: CNAFINST 4790.2 SERIES ; S/N = 168027 PERFORM FOD INSPECTION DUE TO A/C NOT FLYING FOR 30 DAYS OR MORE.

| | |
|-----------------------------|---------------------------|
| "DRAGONS" | |
| F.C.F | |
| PROFILE: A B <u>C</u> D E F | |
| DATE: 5 Dec 2016 | |
| <u>SAT</u> | UNSAT |
| PILOT SIGN | (b) (6) b (3) 10 USC 130b |

CORRECTIVE ACTION

PERFORMED 30 DAY NO FLY FOD INSPECTION IAW CNAFINST 4790.2. ATAF,APAF,AFF.

| | | | | |
|--------------|---|--|----------------|------------------|
| CORRECTED BY | INSPECTED BY (b)(6) (b)(3) 10 U.S. Code § 130b | MAINT CONTROL (b)(6) (b)(3) 10 U.S. Code § 130b | MCN 2OMBXZZ | JCN GH5340330 |
|--------------|---|--|----------------|------------------|



UNITED STATES MARINE CORPS

MARINE AVIATION TRAINING SYSTEM SITE FUTENMA
1st MARINE AIRCRAFT WING AVIATION TRAINING SYSTEM
MCAS FUTENMA, OKINAWA, JAPAN
UNIT 37301
FPO AP 96386-7301

IN REPLY REFER TO:

5800.7

MATSS

28 Apr 17

From: (b)(6) (b)(3) 10 U.S. Code § 130b Command Investigator ICO 13 DEC16
MV-22B Mishap
To: 1st Marine Aircraft Wing Staff Judge Advocate
Subj: ENCLOSURE 50
Ref: (a) JAGINST 5800.7f (JAGMAN)
(b) 16 DEC 16 MV-22B Mishap Command Investigation
Appointment Letter

1. Enclosure (50) is the Official Aircraft LogBook of MV-22B Osprey Bureau Number 168027 and is in the custody of Marine Medium Tiltrotor Squadron-265, Marine Aircraft Group 36, 1st Marine Aircraft Wing.

2. All information is to be considered to be For Official Use Only (FOUO).

4. The point of contact in this matter is (b)(6) (b)(3) 10 U.S. Code § 130b and can be reached at (b)(6) (b)(3) 10 U.S. Code § 130b or DSN: (b)(6) (b)(3) 10 U.S. Code § 130b

Enclosure 51

Report containing findings from in-field investigation concerning VMM-265's Class A mishap involving Aircraft BuNo 168027 which occurred on 13 December 2016

9 pages

Withheld in accordance with FOIA Exemption (b)(5)

| FLIGHT WEATHER BRIEF | | | | | | | | | | | | | | |
|---|--|--|--|---|--|--|--|---|--------------------------------|--|----------------------------------|-------------------------------|-------------------------------|---------------------------------|
| PART I - TAKEOFF DATA | | | | | | | | | | | | | | |
| 1. DATE 161213 | 2. ACFT Type/NO. DRAGN05/MV22/ | 3. DEP PT/ETD ROTM 0845 | 4. RWY TEMP 22C/72F | 5. DEWPOINT 18C/64F | 6. TEMP DEV +7 | 7. PRES ALT +350 FT | 8. DENSITY +1643 FT | | | | | | | |
| 9. SFC WIND 31014G21KT | 10. CLIMB WINDS SFC-050: 32020KT | | 11. LOCAL WEATHER WATCH/WARNING/ADVISORY XWND ADV VT: UNTIL 23L | | | | 12. RSC/RCR N/A | | | | | | | |
| 13. REMARKS/TAKEOFF ALTN FCST 050-090: 27030KT | | | | | | | | | | | | | | |
| PART II - ENROUTE & MISSION DATA | | | | | | | | | | | | | | |
| 14. FLT LEVEL/WINDS/TEMP <input checked="" type="checkbox"/> SEE ATTACHED | | | 15. SPACE WEATHER | | | | 16. SOLAR/ LUNAR | | LOCATION | | | | | |
| 070 27030KT / +8°C | | | NO IMPACT | | MARGINAL | SEVERE | BMNT | | Z | | | | | |
| | | | FREQ | | | | SR | | Z | | MR | Z | | |
| | | | GPS | | | | SS | | Z | | MS | Z | | |
| | | | RAD | | | | EENT | | Z | | ILLUM | % | | |
| 17. CLOUDS AT FLT LEVEL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> IN AND OUT | | | 18. OBSCURATIONS AT FLT LEVEL RESTRICTING VISIBILITY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO TYPE N/A | | | | | | 7 miles visibility | | | | | |
| 19. MINIMUM CEILING - LOCATION N/A FT AGL - N/A | | | 20. MAXIMUM CLOUD TOPS - LOCATION 100 FT MSL - ROTM | | | | 21. MINIMUM FREEZING LVL - LOCATION 120 FT MSL - ROTM | | | | | | | |
| 22. THUNDERSTORMS | | | 23. TURBULENCE | | | 24. ICING | | | 25. PRECIPITATION | | | | | |
| CHART | | | CHART | | | CHART | | | CHART | | | | | |
| <input checked="" type="checkbox"/> NONE | <input type="checkbox"/> AREA | <input type="checkbox"/> LINE | <input type="checkbox"/> NONE | <input type="checkbox"/> IN CLEAR | <input checked="" type="checkbox"/> IN CLOUD | <input checked="" type="checkbox"/> NONE | <input type="checkbox"/> RIME | <input type="checkbox"/> MIXED | <input type="checkbox"/> CLEAR | <input checked="" type="checkbox"/> NONE | <input type="checkbox"/> DRIZZLE | <input type="checkbox"/> RAIN | <input type="checkbox"/> SNOW | <input type="checkbox"/> PELLET |
| ISOLATED 1 - 2% | | | LIGHT | | | TRACE | | | LIGHT | | | | | |
| FEW 3 - 15% | | | MODERATE | | | LIGHT | | | MODERATE | | | | | |
| SCATTERED 16 - 45% | | | SEVERE | | | MODERATE | | | HEAVY | | | | | |
| NUMEROUS > 45% | | | EXTREME | | | SEVERE | | | SHOWERS | | | | | |
| HAIL, SEVERE TURBULENCE & ICING, HEAVY PRECIPITATION, LIGHTNING & WIND SHEAR EXPECTED IN AND NEAR THUNDERSTORMS | | | LEVELS SFC-040 | | | LEVELS | | | FREEZING | | | | | |
| LOCATION | | | LOCATION ROTM | | | LOCATION | | | LOCATION | | | | | |
| PART III - AERODROME FORECASTS | | | | | | | | | | | | | | |
| 26. | 27. VALID TIME | 28. SFC WIND | 29. VSBY/WEA | 30. CLOUD LAYERS | | 31. ALTIMETER | RWY TEMP | PRES ALT | | | | | | |
| DEST- ROTM | 1145Z to 1345Z | 30013G20KT | 9999 / NSW | SCT020 | | 29.87 INS | 22 C | 312 FT | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| PART IV - COMMENTS/REMARKS | | | | | | | | | | | | | | |
| 32. BRIEFED RSC/RCR | <input type="checkbox"/> YES <input checked="" type="checkbox"/> NOT AVAILABLE | 33. PMSV | | 290.6 | | 34. ATTACHMENTS | | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | | | | | |
| 35. REMARKS METAR ROTM 130558Z 29013KT 9999 SCT020 BKN120 24/21 A2985 RMK SLP090 60003 T02390206 10239 20217 57010 NO REMARKS | | | | | | | | | | | | | | |
| PART V - BRIEFING RECORD | | | | | | | | | | | | | | |
| 36. WX BRIEFED TIME 13 / 0755 | 37. FLIMSY BRIEFING NO. ROTM 12 - 26 | 38. FORECASTER'S NAME (b)(6) (b)(3) | | 39. NAME OF PERSON RECEIVING BRIEFING (b)(6) (b)(3) 10 | | | | | | | | | | |
| 40. VOID TIME 13 / 0915 | 41. EXTENDED TO/INITIALS Z | 42. WX REBRIEF TIME/INITIALS Z | | 43. WX DEBRIEF TIME/INITIALS | | | | | | | | | | |

Enclosure 53

AV-1V22AB-NFM-000 MV-22B NATOPS Flight Manual

Withheld in accordance with FOIA Exemption (b)(3) 10 U.S.C. § 130

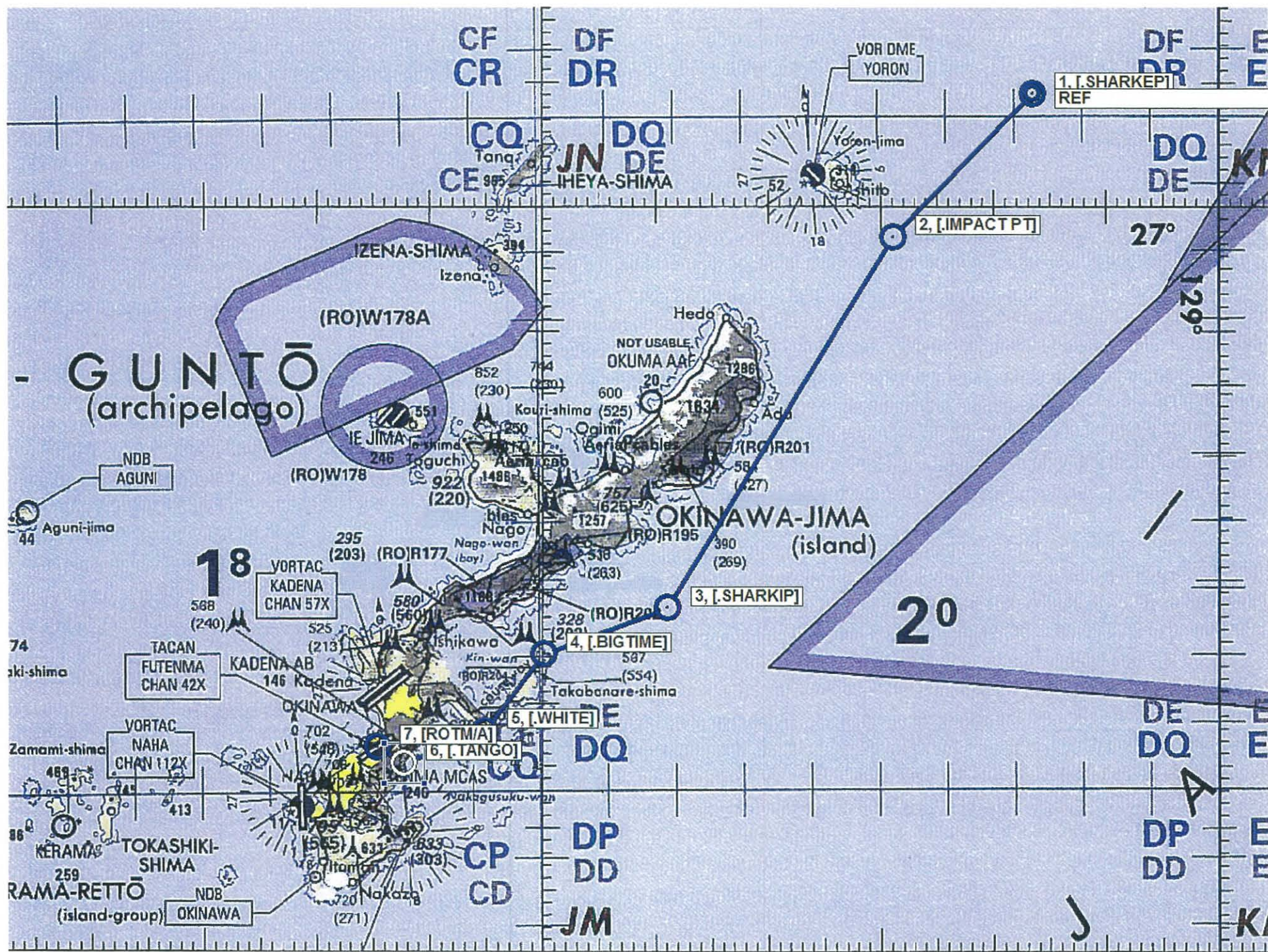
Enclosure 54

ASIST DN06 mishap recreation video

Withheld in accordance with FOIA Exemption (b)(5)

Yoron Jima





Enclosure 56

Summary Testimony of REDACTED

9 pages

Withheld in accordance with FOIA Exemptions (b)(3), (b)(6), and (b)(7)