

UNITED STATES AIR FORCE
AIRCRAFT ACCIDENT INVESTIGATION
BOARD REPORT



F-16CM, T/N 90-816

**14TH FIGHTER SQUADRON
35TH FIGHTER WING
MISAWA AIR BASE, JAPAN**



LOCATION: ROKKASHO, JAPAN

DATE OF ACCIDENT: 6 NOVEMBER 2019

BOARD PRESIDENT: LT COL NATHANAEL L. KARRS

Conducted IAW Air Force Instruction 51-307

**EXECUTIVE SUMMARY
UNITED STATES AIR FORCE
AIRCRAFT ACCIDENT INVESTIGATION**

**F-16CM, T/N 90-816
Rokkasho, Japan
6 November 2019**

On 6 November 2019, at 0937 Zulu (Z) time, an F-16CM aircraft, tail number 90-816 (Mishap Aircraft (MA)), assigned to the 14th Fighter Squadron, 35th Fighter Wing, Misawa Air Base (MAB), Japan, released an inert GBU-12 bomb that impacted the ground outside of Draughon Range (Range), a U.S. Government-administered bombing range 15 miles north of MAB. The MA was flying with six other aircraft on a night Suppression of Enemy Air Defense Flight Lead Upgrade sortie. The GBU-12 impacted private property near the northern edge of Lake Ogawara. There were no deaths or injuries and there was no damage to government property or private structures.

At a mass mission brief, the pilot deploying the GBU-12 in question (Mishap Pilot (MP)) was informed that his aircraft would carry an inert GBU-12 and that if the mission and weather allowed, he should employ the weapon during the sortie. The MP discussed the Range restrictions and planned attack with his wingman. Later, the MP learned he would be flying as a single ship. He departed as a single ship at approximately 0840Z. During the sortie, the MP tried twice to drop the weapon on the tactical target at the Range but was unable due to a scattered layer of clouds that obscured the target. After the vulnerability period was done and primary training complete, the MP elected to make another attempt at dropping the GBU-12. At around 0934Z, the MP requested assistance from another two ship with call signs Shinzo 1 and 2 (Shinzo Flight (SO); (SO1) and (SO2), respectively). Based on the observed weather over the Range, the MP concluded that if SO could guide his GBU-12 in, he could safely drop. SO1 and SO2 were able to visually acquire the target and informed the MP that they could guide his weapon. While on his attack run, the MP asked SO1 to transmit his Sensor Point of Interest (SPI), which was located on the tactical target. At around 0935Z, SO1 communicated that he was transmitting the SPI. At this point, the MP selected symbology that he believed corresponded to SO1's SPI. However, the SPI he selected was approximately 3.4 miles from the correct target. The MP communicated that he had "captured" SO1's SPI and continued his attack run. SO1 acknowledged and both the MP and SO1 failed to confirm that the SPI sent by SO1 was the SPI received in the MP's aircraft. At around 0937Z, believing he had the correct SPI, the MP dropped his weapon when his system gave him a release cue. The GBU-12 flew its ballistic computed flight path to the incorrect SPI.

The Accident Investigation Board President determined, by a preponderance of the evidence, that the cause of the mishap was pilot error. He concluded that a failure of communication during an assisted weapons deployment procedure caused the MP to fail to confirm that the SPI he had selected was the target to which the other formation was guiding the weapon. Substantially contributing factors include channelized attention, changing weather, and targeting technical error.

Under 10 U.S.C. § 2254(d) the opinion of the accident investigator as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report, if any, may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.

SUMMARY OF FACTS AND STATEMENT OF OPINION
F-16CM, T/N 90-816
6 November 2019

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ACRONYMS AND ABBREVIATIONS

14 FS	14th Fighter Squadron	PACAF	Pacific Air Forces
35 FW	35th Fighter Wing	PSI	Pounds Per Square Inch
35 OG	35th Operations Group	RAP	Ready Aircrew Program
5 AF	Fifth Air Force	RTB	Return-To-Base
AF	Air Force	RWD	Right Wing Down
AFE	Air Flight Equipment	SAT	Surface Attack Tactics
AFI	Air Force Instruction	SEAD	Suppression of Enemy Air Defenses
AGL	Above Ground Level		
AIB	Accident Investigation Board	SIM	Simulation
ATD	Actual Time of Departure	SPI	Sensor Point of Interest
BSA	Basic Surface Attack	T/N	Tail Number
CMR	Combat Mission Ready	TISL	Target Indication Set Laser
DoD	Department of Defense	VUL	Vulnerability Period
FL	Flight Lead	Z	Zulu
FLUG	Flight Lead Upgrade		
FPM	Feet Per Minute		
FS	Fighter Squadron		
ft	Feet		
g	Gravitational Force		
HUD	Heads-Up Display		
IAW	In Accordance With		
IMC	Instrument Meteorological		
IFDL	Intra-Flight Data Link		
IP	Instructor Pilot		
K	Thousand		
KCAS	Knots Calibrated Airspeed		
KTAS	Knots True Airspeed		
kts	Knots		
L	Local Time		
LWD	Left Wing Down		
MA	Mishap Aircraft		
MAB	Misawa Air Base		
MAJCOM	Major Command		
MFD	Multi-Function Display		
MIP	Mishap Instructor Pilot		
MP	Mishap Pilot		
MS	Mishap Sortie		
MSL	Mean Sea Level		
ND	Nose Down		
NM	Nautical Miles		
NOTAMs	Notices to Airmen		
NVGs	Night Vision Goggles		
Ops	Operations Tempo		
ORM	Operational Risk Management		

The above list was compiled from the Summary of Facts, the Statement of Opinion, the Index of Tabs, and Witness Testimony (Tab V).

SUMMARY OF FACTS

1. AUTHORITY AND PURPOSE

a. Authority

On 13 December 2019, Major General Brian M. Killough, Deputy Commander, Pacific Air Forces (PACAF), appointed Lieutenant Colonel Nathanael L. Karrs to conduct an aircraft accident investigation for a mishap that occurred on 6 November 2019 involving an F-16CM aircraft, tail number (T/N) 90-816, at Misawa Air Base (MAB), Japan. (Tab Y-2) The investigation was conducted at MAB, Japan, from 14 December 2019 through 23 December 2019. The following board members were appointed: a Captain Legal Advisor and a Technical Sergeant Recorder. (Tab Y-5 to Y-6)

b. Purpose

In accordance with AFI 51-307, *Aerospace and Ground Accident Investigations*, this accident investigation board conducted a legal investigation to inquire into all the facts and circumstances surrounding this Air Force aerospace accident, prepare a publicly releasable report, and obtain and preserve all available evidence for use in litigation, claims, disciplinary action, and adverse administrative action.

2. ACCIDENT SUMMARY

The mishap aircraft (MA), an F-16CM, T/N 90-816, assigned to the 14th Fighter Squadron located at MAB, Japan, flown by the mishap pilot (MP), departed and landed at Misawa AB on 6 November 2019. (Tabs V-1.1 to V-1.2) The MP released an inert bomb that impacted privately-owned land near Rokkasho, Japan, though the intended target was within Draughton Range, a U.S.-Government-administered bombing range. (Tab V-1.10) There were no casualties and there was no damage to government property or privately-owned structures.

3. BACKGROUND

a. Pacific Air Forces (PACAF)

PACAF's primary mission is to provide ready air and space power to promote U.S. interests in the Asia-Pacific region during peacetime, through crisis, and in war. (Tab BB-2) PACAF's area of responsibility is home to 60 percent of the world's population in 36 nations spread across 52 percent of the Earth's surface and 16 time zones, with more than 1,000 languages spoken. (Tab BB-2) PACAF maintains a forward presence to help ensure stability in the region. (Tab BB-2)



The command has approximately 320 fighter and attack aircraft and 46,000 military and civilian

personnel serving in nine major locations and numerous smaller facilities, primarily in Hawaii, Alaska, Japan, Guam and the Republic of Korea. (Tab BB-2)

b. Fifth Air Force (5 AF)

5 AF's mission is three-fold. First, 5 AF plans, conducts, controls, and coordinates air operations in accordance with tasks assigned by the PACAF Commander. Secondly, 5 AF maintains a level of readiness necessary for successful completion of directed military operations. Third and finally, 5 AF assists in the mutual defense of Japan and enhances regional stability by planning, exercising, and executing joint air operations in partnership with Japan. To achieve this mission, 5 AF maintains its deterrent force posture to protect both U.S. and Japanese interests, and conducts appropriate air operations should deterrence fail. (Tab BB-3)



c. 35th Fighter Wing (35 FW)

The 35 FW, headquartered at Misawa AB, Japan, provides worldwide deployable forces, protects U.S. interests in the Pacific, and defends Japan with sustained forward presence and focused mission support. (Tab BB-4) The wing operates and maintains two squadrons of F-16CM (C and D models) Block 50 Fighting Falcons. (Tab BB-4) The 35 FW is the Air Force's premier Wild Weasel organization and specializes in the suppression and destruction of enemy air defenses including surface-to-air-missile systems. (Tab BB-4)



d. 35th Operations Group (35 OG)

The 35 OG is a component of the 35 FW, Misawa AB, Japan. It is a combat-ready fighter group of two deployable F-16CM "Wild Weasel" fighter squadrons, one operational support squadron, and one air control flight capable of conducting and supporting air operations worldwide. The 35 OG is responsible for flight operations, airfield management, intelligence, tactical air control, combat plans, weapons and tactics, and weather support to the 35 FW. (Tab BB-7)



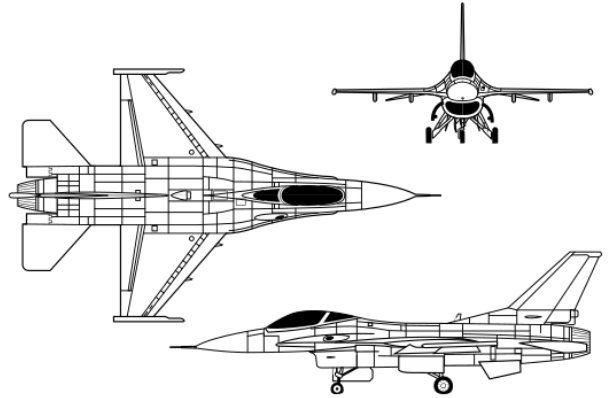
e. 14th Fighter Squadron (14 FS)

The mission of the 14 FS is to provide Suppression of Enemy Air Defenses (SEAD) combat airpower to the combatant commanders. (Tab BB-10) During its distinguished 76-year history, the 14 FS has flown 8 different types of aircraft, received 21 unit citations, and accumulated 20 campaign streamers. (Tab BB-10)



f. The F-16 Fighting Falcon

The F-16 Fighting Falcon is a compact, multi-role fighter aircraft. It is highly maneuverable and has proven itself in air- to-air combat and air-to-surface attack. It provides a relatively low-cost, high-performance weapon system for the United States and allied nations. (Tab BB-12) Since 11 September 2001, the F-16 has been a major component of the combat forces flying thousands of sorties in support of Operations Noble Eagle (Homeland Defense), Enduring Freedom in Afghanistan, and Iraqi Freedom. (Tab BB-12)



4. SEQUENCE OF EVENTS

a. Mission

On Wednesday, 6 November 2019, the MP was scheduled to lead a two-ship strike formation in support of a Night SEAD Flight Lead Upgrade (FLUG) sortie. (Tab V-1.2) There were eight aircraft scheduled to support the sortie with four in the SEAD flight, two strikers and two aircraft that would act as adversaries. (Tab V-1.2) The 14 FS Operations Supervisor authorized the flight. (Tab V-1.2)

b. Planning

The MP attended a mass mission brief consisting of all the pilots that would be flying in the mission. (Tabs V-1.2 to V-1.4) During the brief, weather were covered and the information that his aircraft would have a GBU-12 was passed. (Tab V-1.6) The MP then attended a coronation brief where the FLUG pilot briefed the adversaries and the MP's formation on their overall game plan and deconfliction for the sortie. (Tabs V-1.2 to V-1.4) After this brief, the MP continued with his two-ship attack briefing where they added the range and attack restrictions for GBU-12 employment. (Tabs V-1.2 to V-1.4)

c. Preflight

The Operations Supervisor briefed the crews prior to stepping out to the fighters that there were only seven of the scheduled eight aircraft available. (Tab V-1.5) A decision was made at that time to send the MP as a single ship to ensure the FLUG pilot had the required four ship and at least two adversaries to fight. (Tab V-1.5) Preflight, engine start, taxi, arming and the departure were all normal. (Tab V-3.1)

d. Summary of Accident

On 6 November 2019, at 0937 Zulu (Z) time, an F-16CM aircraft, tail number 90-816 (Mishap Aircraft (MA)), assigned to the 14th Fighter Squadron, 35th Fighter Wing, Misawa Air Base (MAB), Japan, released an inert GBU-12 bomb that impacted the ground outside of Draughon

Range (Range), a U.S. Government-administered bombing range 15 miles north of MAB. (Tabs V-1.1 to V-1.2) The MA was flying with six other aircraft on a night Suppression of Enemy Air Defense Flight Lead Upgrade sortie. (Tab V-1.2) The GBU-12 impacted private property near the northern edge of Lake Ogawara. (Tab V-1.10) There were no deaths or injuries and there was no damage to government property or private structures.

At the mass mission brief, the pilot deploying the GBU-12 in question (Mishap Pilot (MP)) was informed that his aircraft would carry an inert GBU-12 and that if the mission and weather allowed, he should employ the weapon during the sortie. (Tabs V-1.2 to V-1.4) The MP discussed the Range restrictions and planned attack with his wingman. (Tabs V-1.2 to V-1.4) Later, the MP learned he would be flying as a single ship. He departed as a single ship at approximately 0840Z. (Tab V-1.5) During the sortie, the MP tried twice to drop the weapon on the tactical target at the Range but was unable due to a scattered layer of clouds that obscured the target. (Tabs V-1.9 to V-1.10) After the initial period in which the MP was away from MAB and vulnerable to simulated harm, and once primary training complete, the MP elected to make another attempt at dropping the GBU-12. (Tabs V-1.9 to V-1.10) At around 0934Z, the MP requested assistance from another two ship with call signs Shinzo 1 and 2 (Shinzo Flight (SO); (SO1) and (SO2), respectively). (Tabs V-1.9 to V-1.10) Based on the observed weather over the Range, the MP concluded that if SO could guide his GBU-12 in, he could safely drop. (Tabs V-1.9 to V-1.10) SO1 and SO2 were able to visually acquire the target and informed the MP that they could guide his weapon. (Tab V-1.10) While on his attack run, the MP asked SO1 to transmit his Sensor Point of Interest (SPI), which was located on the tactical target. (Tab V-1.10) At around 0935Z, SO1 communicated that he was transmitting the SPI. (Tab V-1.10) At this point, the MP selected symbology that he believed corresponded to SO1's SPI. (Tab V-1.10) However, the SPI he selected was approximately 3.4 miles from the correct target. (Tab V-1.10) The MP communicated that he had "captured" SO1's SPI and continued his attack run. (Tab V-1.10) SO1 acknowledged and both the MP and SO1 failed to confirm that the SPI sent by SO1 was the SPI received in the MP's aircraft. (Tab V-1.10) At around 0937Z, believing he had the correct SPI, the MP dropped his weapon when his system gave him a release cue. The GBU-12 flew its ballistic computed flight path to the incorrect SPI. (Tab V-1.10)

The Accident Investigation Board President determined, by a preponderance of the evidence, that the cause of the mishap was pilot error. He concluded that a failure of communication during an assisted weapons deployment procedure resulted in the MP failing to confirm that the SPI he had selected was the target to which the other formation was guiding the weapon. Substantially contributing factors include channelized attention, changing weather, and targeting technical error.

e. Impact

N/A

f. Egress and Aircrew Flight Equipment (AFE)

N/A

g. Search and Rescue (SAR)

N/A

h. Recovery of Remains

N/A

5. MAINTENANCE

a. Forms Documentation

N/A

b. Inspections

N/A

c. Maintenance Procedures

N/A

d. Maintenance Personnel and Supervision

N/A

e. Fuel, Hydraulic, and Oil Inspection Analyses

N/A.

f. Unscheduled Maintenance

N/A

6. AIRFRAME, MISSILE, OR SPACE VEHICLE SYSTEMS

a. Structures and Systems

The GBU-12 Paveway II is an American aerial laser-guided bomb, based on the Mk 82 500-pound general-purpose bomb, but with the addition of a nose-mounted laser seeker and fins for guidance. (Tab V-1.12) A member of the Paveway series of weapons, Paveway II entered into service c. 1976. (Tab V-1.12) The version dropped on the night of the mishap carried no explosive material, the internal cavity of the bomb is filled with an inert filler. (Tab V-1.12)

b. Evaluation and Analysis

N/A

7. WEATHER

a. Forecast Weather

The weather was forecasted over the target area and in the working airspace as a scattered to broken layer of clouds between six to eight thousand feet above sea level. (Tab V-1.5) Visibility was clear below and above the clouds but considered low for the use of Night Vision Devices below the weather. (Tabs V-1.5 and V-1.12)

b. Observed Weather

Observed weather on the night of the mishap was a scattered to broken layer of clouds between four thousand to eight thousand over the land with clearer air over the sea. (Tab V-1.5)

c. Space Environment

N/A

d. Operations

All Operations were conducted within known limitations and regulations.

8. CREW QUALIFICATIONS

a. Mishap Pilot

The MP was a fully qualified four-ship Flight Lead, the mishap instructor pilot (MIP or SO 01) was a fully qualified Instructor Pilot. (Tab T-2) No training deficiencies relevant to the mishap have been discovered during the investigation. (Tabs T-2 through T-5) All crewmember’s training currency, performance, experience level, and overall qualifications were sufficient for the sortie. (Tab T-2 through T-5) The 30-60-90 hourly/sortie look back for the MP was 11.8/28.3/47.5 and 9/23/35. (Tab T-3) The 30-60-90 hourly/sortie look back for the MIP/SO 01 was 13.2/24.5/37.6 and 10/19/29 respectively. (Tab T-4)

Recent flight time is as follows:

MP	Hours	Sorties
30 days	11.8	9
60 days	28.3	23
90 days	47.5	35
MIP/SO 01	Hours	Sorties
30 days	13.2	10
60 days	24.5	19
90 days	37.6	29

Table 1. Recent Flying Hours for MP and MIP/SO 01(30/60/90 Day Look Back) (Tabs T-2 and T-3)

9. MEDICAL

a. Qualifications

All aircrew interviewed and involved in this mishap were medically qualified and fit for flight duty status.

b. Health

N/A

c. Pathology

N/A

d. Lifestyle

There is no evidence to suggest lifestyle factors were a factor in the mishap.

e. Crew Rest and Crew Duty Time

All Crew Rest and Crew duty day requirements were met for a night sortie.

10. OPERATIONS AND SUPERVISION

a. Operations

Operations tempo and or Crew Duty Day was not found to be a significant factor in this mishap.

b. Supervision

The mission was planned and authorized with the proper level of Squadron supervision, and all aspects of Crew Resource Management reviewed by the MP, MIP/SO 01 and Squadron Operations Supervisor prior to the sortie.

11. HUMAN FACTORS

The Department of Defense Human Factors Analysis and Classification System (DOD HFACS) Version 7.0 was referenced for the factors listed below that may have contributed to the mishap.

a. Human Factor 1, AE103 Procedure Not Followed Correctly: is a factor when a procedure is performed incorrectly or accomplished in the wrong sequence.

b. Human Factor 2, AE107 Rushed or Delayed a Necessary Action: is a factor when an individual takes the necessary action as dictated by the situation but performs these actions too quickly or too slowly.

c. Human Factor 3, AE200 Judgment and Decision-making Errors: are factors that occur when an individual proceeds as intended, yet the plan proves inadequate or inappropriate for the situation, e.g. "An honest mistake."

d. Human Factor 4, PE101 Environmental Conditions Affecting Vision: is a factor that includes obscured windows; weather, fog, haze, darkness; smoke, etc.; brownout/whiteout (dust, snow, water, ash or other particulates); or when exposure to windblast affects the individual's ability to perform required duties.

e. Human Factor 5, PP107 Standard/Proper Terminology Not Used: is a factor when clear and concise terms, phrases, hand signals, etc. per service standards and training were not used.

f. Human Factor 6, PP108 Failed to Effectively Communicate: is a factor when communication is not understood or is misinterpreted as the result of behavior of either sender or receiver. Communication failed to include backing up, supportive feedback or acknowledgement to ensure that personnel correctly understood announcements or directives.

12. GOVERNING DIRECTIVES AND PUBLICATIONS

a. Publicly Available Directives and Publications Relevant to the Mishap

AFI 11-214, *Air Operations Rules and Procedures*, 14 August 2012

AFMAN 11-2F-16V3, *F-16 Operations Procedures*, 4 February 2020

AFI 11-2F-16V3_35FWSUP, *F-16 Operations Procedures*, 12 June 2017

NOTICE: All directives and publications listed above are available digitally on the Air Force Departmental Publishing Office website at: <http://www.e-publishing.af.mil>.

b. Other Directives and Publications Relevant to the Mishap

35th Fighter Wing Instruction 13-203, *Range Operations and Maintenance*, 30 April 2014

c. Known or Suspected Deviations from Directives or Publications

(1) AFI 11-214 5.1.1.6: Aircraft employing Inertially Aided Munitions (IAMs) in bomb-on-coordinate mode or aircraft employing any ordnance in a system delivery mode on coordinates only will adhere to the following prior to release:

(a) AFI 11-214 5.1.1.6.2: Aircrew will ensure accurate receipt and entry of target coordinates and confirm they come from a valid target source. These coordinates will be verified via read-back from target data entry displays or will be cross-checked with mission planning data, range guides, or visual/sensor confirmation of target with a valid target source. Aircrew will verify correct data is selected prior to the "IN" call. Examples of valid target sources include, but are not limited to Range Control Officers (RCOs), JTACs, Range Guides, or FAC(A) qualified aircrew, or the coordinates may be generated on-board the aircraft and then entered into the weapon/steer point/waypoint (as appropriate per weapon and platform).

(b) AFI 11-214 5.1.1.6.3: Aircrew will use all means available to verify accuracy of target coordinates/elevation, and that the coordinates are within the anticipated target area. Examples of available means include but are not limited to; Targeting Pod (TGP), Forward Looking Infrared (FLIR), radar, Synthetic Aperture Radar (SAR) map, HUD cueing, other aircraft sensors, terrain pointers, map plots, data links, radio communications, talk-on with JTACs, RCOs, other aircrew members, etc.

(2) AFI 11-214 5.3.7: Abort Criteria. Along with the general criteria set in paragraph 3.4 (KIO and Terminate Procedures), cease-fire, and/or abort the pass and do not release if any of the following situations occur:

- (a) 5.3.7.3. If unable to positively identify the target or confirm correct target coordinates for IAM deliveries or system deliveries in coordinate only mode.

- (3) AFI 11-2F-16V3: 6.7. Target Identification. Pilots shall positively identify the target prior to weapons release. (T-1). For wartime or contingency sorties, pilots must comply with ROE. (T-1). For training sorties, pilots must achieve positive identification by either visually acquiring the target or by confirming target location through valid on-board/off-board cues. (T-1). Cues may include, but are not limited to, radar, GPS, marking rounds, TGP or IR Maverick lock on, IR pointers or NVG-compatible marking devices. Exercise caution when relying on a single cue to confirm target location.

3 April 2020

NATHANAEL L. KARRS, Lt Col, USAF
President, Accident Investigation Board

STATEMENT OF OPINION

**F-16CM, T/N 90-816
Rokkasho, Japan
6 November 2019**

Under 10 U.S.C. § 2254(d) the opinion of the accident investigator as to the cause of, or the factors contributing to, the accident set forth in the accident investigation report, if any, may not be considered as evidence in any civil or criminal proceeding arising from the accident, nor may such information be considered an admission of liability of the United States or by any person referred to in those conclusions or statements.

1. OPINION SUMMARY

I determine, by a preponderance of the evidence, that the cause of the mishap was pilot error. I conclude that a failure of communication during an assisted weapons deployment procedure caused the mishap pilot (MP) to fail to confirm that the Sensor Point of Interest (SPI) he had selected was the target to which the other formation was guiding the weapon. Substantially contributing factors include channelized attention, changing weather, and targeting technical error.

2. CAUSE

On 6 November 2019, at 0937 Zulu (Z) time, an F-16CM aircraft, tail number 90-816 (Mishap Aircraft (MA)), assigned to the 14th Fighter Squadron, 35th Fighter Wing, Misawa Air Base (MAB), Japan, released an inert GBU-12 bomb that impacted the ground outside of Draughon Range (Range), a U.S. Government-administered bombing range 15 miles north of MAB. The MA was flying with six other aircraft on a night Suppression of Enemy Air Defense Flight Lead Upgrade sortie.

This mishap was caused by the MP's failure to positively identify that the SPI he selected was in fact the authorized target that was located inside of the Range for GBU-12 attacks. In particular, when cloud cover prevented MP from visually guiding his GBU-12 to the correct target, he relied on another pilot to identify and lock onto the target. When the identified target was transmitted to the MP for bomb drop, the MP and the pilot who identified the target did not use the standard communication to confirm that the correct target was selected. The MP failed to correctly perform the procedure for positively identifying the selected SPI and failed to use concise terms per service standards (Human Factors 1 and 5). He performed the action too quickly, causing him to make a mistake (Human Factors 2 and 3). The ultimate cause was pilot error.

3. SUBSTANTIALLY CONTRIBUTING FACTORS

a. Substantially Contributing Factor 1: Channelized Attention of the MP on his aircraft tactical display as he made repeated attempts to release the weapon in accordance with the range regulations. This channelized attention led to a breakdown in communication between the MP and the Mishap Instructor Pilot (MIP) that normally would have allowed them to ensure that each other's aircraft systems had the same target selected and identified prior to weapon release

(Human Factor 6). Had communication not deteriorated, the MP might have been made aware of the incorrect target.

b. Substantially Contributing Factor 2: Weather that occluded the target area and prevented the MP's own ship targeting pod from seeing the target. The MP twice tried to drop the weapon on the tactical target at the Range but could not due to a scattered layer of clouds that obscured the target. Additionally, the sortie took place after sunset, so the MP operated substantially in darkness (Human Factor 4). All these elements led the MP to rely on another pilot to identify the target; under ordinary circumstances, the MP would visually identify the target for himself.

c. Substantially Contributing Factor 3: Spuriously generated SPI coincided with the MP's request for the MIP to send his SPI of the target prior to weapon release. Neither the MP nor any of the other pilots that were airborne at the time in his vicinity created the SPI. Absent such an aberrant SPI, there likely would not have been any confusion between the erroneous target and the actual target.

4. CONCLUSION

I find by a preponderance of the evidence that the cause of the mishap was pilot error. At no point during my investigation did I uncover any evidence that the accident was the result of a deficiency in training, leadership, supervision, or willful disregard for regulations. The exact opposite was presented to me during the course of my interviews with the MP, MIP, and the squadron Weapons Officer, along with leadership at all levels. I did not find that the mission-planning, brief, risk management, operations supervision, or training of the pilots amounted to substantial contributing factors in the mishap.

3 April 2020

NATHANAEL L. KARRS, Lt Col, USAF
President, Accident Investigation Board

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Not used	A
Not used	B
Not used	C
Not used	D
Not used	E
Not used	F
Not used	G
Not used	H
Not used	I
Not used	J
Not used	K
Not used	L
Not used	M
Not used	N
Not used	O
Not used	P
Not used	Q
Not used	R
Not used	S
Personnel Records Not Included in Tab G.....	T
Not used	U
Witness Testimony And Statements	V

Not used	W
Not used	X
Legal Board Appointment Documents	Y
Not used	Z
Not used	AA
Applicable Regulations, Directives, and Other Government Documents	BB