RAS 5336 72-22-ISFSI — Applicant Exhibit 140 — Rec'd 7/1/02

AIRCRAFT ACCIDENT INVESTIGATION REPORT

(AFR 110-14)

TYPE: F-16A

DATE: 31 AUGUST 1992

LOCATION: PINETTA, FLORIDA

PFS Exh. 140

57401

Template = SECY-028

SECY-02

NUCLEAR REGULATORY COMMISSION

Docket No. _____ Official Exh. No. 140

In the matter of PFS

Staff _____	IDENTIFIED ✓
Applicant ✓	RECEIVED ✓
Intervenor _____	REJECTED _____
Other _____	WITHDRAWN _____
DATE 7/1/02	Witness _____
Clerk _____	

II. SUMMARY OF FACTS

A. HISTORY OF FLIGHT

The mishap aircraft, F-16A, S/N 81-0697, (call sign: SWAT 01) was the lead aircraft of what was originally planned as a three (3) F-16's versus two (2) F-18's air-to-air combat tactics continuation training sortie. However, prior to departure, one of the F-16's was not provided because that aircraft was not configured for the mission. The mission was subsequently flown as a two (2) versus two (2) air combat continuation training sortie.

The flight of two F-16's (SWAT 01 and SWAT 02) departed Tyndall AFB, FL on 31 August 1992 at approximately 1445 hours local time (CDT). The flight was cleared via the River Standard Instrument Departure (SID) at 21,000 feet Mean Sea Level (MSL) to the Live Oak Military Operating Area (MOA). Live Oak MOA is in Northern Florida, approximately 125 nautical miles from Tyndall AFB, FL. For 20 minutes the flight orbited the Live Oak MOA awaiting the arrival of the F-18's.

At approximately 1623 local time (EDT), the mishap pilot heard a bang and felt a rumble and vibration. The mishap pilot noticed the engine Revolutions Per Minute (RPMs) and the Forward Turbine Inlet Temperature (FTIT) decreasing. While the mishap pilot attempted a series of three (3) engine air starts, the wingman (SWAT 02) radioed Jacksonville, Florida Air Route Traffic Control Center with a distress call and requested vectors to the nearest suitable airfield. Jacksonville Center told the mishap pilot that the nearest suitable airport was Valdosta, Georgia Municipal Airport. The mishap pilot calculated that he could not reach Valdosta Municipal Airport by using an engine-out gliding procedure. At approximately 5,000 feet MSL, he turned the aircraft away from populated areas, abandoned further air start attempts and prepared for an ejection.

At approximately 1628 local time (EDT), at an altitude of approximately 2,000 MSL, the mishap pilot successfully ejected, sustaining no injuries. The mishap aircraft impacted a wooded area and burst into flames approximately 150 yards from the nearest inhabited dwelling. A fire occurred but was limited to the undergrowth, burning lightly until extinguished by the Moody AFB, Florida Fire Department (Tabs A, S, and V - [redacted] Statements).

The accident received extensive media coverage and was handled by the Moody AFB Public Affairs Office. (Tab V - [redacted] Statement)

B. MISSION

The mission was to conduct Air Combat Tactics Training versus a flight of two (2) Navy F-18 aircraft in the Live Oak Military Operating Area (MOA) in North Florida. The mishap pilot was [redacted] flying as the flight lead and the wingman was [redacted] The duty status of both pilots was active duty under the authority of Title 32 United States Code (USC) 503 and Air National Guard Regulation (ANGR) 50-01. (Tab V [redacted] and [redacted] Statements)

C. BRIEFING AND PREFLIGHT

The mission briefing was accomplished by [redacted] the flight lead. The briefing was comprehensive and all-inclusive. Takeoff data was put on the Mission Data Card, weather and Notices to Airmen (NOTAMs) were discussed, and the sequence of events including start, taxi, takeoff, enroute cruise, mission tactics, return to base and landing were covered. Inertial Navigation System (INS) points, Special Instructions (SPINS), and training rules of engagement were also discussed. Since the flight was operating out of an unfamiliar airfield, Tyndall AFB, [redacted] made a special point to discuss local area procedures and identified Valdosta Municipal Airport, Georgia and Lake City Municipal Airport, Florida as the nearest emergency airfields from the Live Oak Military Operating Airspace (MOA). (Tab V - [redacted] and [redacted] Statements)

The mission was originally briefed as a three (3) versus two (2) air combat tactics training mission with the mishap pilot leading a flight of two (2) F-16s escorting a third F-16 in a strike role against a flight of two (2) Navy F-18s operating as adversaries in an area defense role. Midway through the pre-flight mission briefing, the mishap pilot was advised that the third F-16 would not be on the mission because its external stores configuration could not be made to be compatible for the mission to meet the scheduled takeoff time. [redacted] had briefed for this contingency, so the mission was flown with the intent that it was to be a two (2) versus two (2) mission. (Tab V - [redacted] and [redacted] Statements)

The mishap aircraft, F-16A S/N 81-0697, flew one mission on 31 August 1992 prior to the mishap flight. The aircraft received the appropriate pre-flight and thru-flight inspections by [redacted] the assigned [redacted] The pre-flight inspection revealed one minor discrepancy (low oil quantity in the accessory drive gearbox [ADG]) which was corrected prior to the first flight of the day. (Tab V - [redacted] Statement)

The flight just prior to the mishap flight was flown by [redacted] of the 120th Fighter Group. The engine operated normally throughout the flight and no engine abnormalities or any other aircraft discrepancies were noted. The thru-flight inspection revealed no problems. (Tab V - [redacted] and [redacted] Statements)

The end-of-runway (EOR) inspection, for the mishap flight, was performed by [redacted] and [redacted], in accordance with Technical Order 1F-16A-6WC-1, and nothing out of the ordinary or any defects were found. Launch of the mishap flight was uneventful and normal. (Tab V - [redacted], and [redacted] Statements)

D. FLIGHT ACTIVITY

On 31 August 1992, a stereo flight plan (PAM 11) was filed at Tyndall AFB Operations under the call sign of SWAT 01. Under this flight plan, a clearance was provided from Tyndall AFB, Florida to the Live Oak Military Operating Area (MOA) via a "River" standard instrument departure at flight level 210, with a 30 minute delay in the Live Oak MOA, and a return to Tyndall AFB, Florida at flight level 240.

An error was entered on the Air Traffic Control (ATC) strip entered into the Federal Aviation Administration (FAA) Service B system computer data base in that the mishap mission was filed as F-15 type aircraft vice F-16 as requested. This mistake was not noticed and never corrected by the 325th Operations Support Squadron at Tyndall AFB, Florida. (Tab K)

The scheduled takeoff time for the mishap flight was 1440 hours CDT and the actual takeoff time was 1445 hours CDT. (Tabs K and V - [redacted] Statement) [redacted] the mishap pilot, led a two-ship close formation takeoff and climb via the "River" standard instrument departure with a cruise at flight level 210 enroute to the Live Oak MOA. After level off, the flight performed a weapons check and then cruised to the MOA in a one-mile line abreast tactical formation. Enroute to the MOA, the mishap pilot requested, from Jacksonville Air Route Traffic Control Center (ARTCC), the airspace up to flight level 500 but was informed that flight level 230 would be the ceiling of the airspace. (Tab V - [redacted] Statement)

Upon entry into the Live Oak MOA, the mishap pilot led the flight through a "G" awareness warm-up maneuver, and conducted an "ops check" of engine parameters and fuel state. Since the F-18 adversaries had not yet arrived in the airspace, [redacted] set the flight up in a racetrack pattern using 10 nautical mile (NM) legs over a pre-briefed inertial navigation system (INS) point in the Northern part of the MOA at a maximum endurance airspeed of 230 knots indicated air speed (KIAS) at an altitude of flight level 210. (Tab V - Conners Statement)

Approximately 20 minutes after entering the Live Oak MOA and after rolling out of a 180 degree turn onto a Northerly heading of 350 degrees magnetic, the mishap pilot heard a loud bang and rumble and felt a vibration accompanied by decreasing engine revolutions per minute (RPMs) and decreasing forward turbine inlet temperature (FTIT). Approximately five (5) seconds later the mishap pilot called to [redacted] wingman (SWAT 02), "I've got an engine failure", followed in a couple of seconds with, "snap to the nearest divert". (Tab V - [redacted] Statement)

[redacted], the wingman (SWAT 02), contacted Jacksonville ARTCC and called, "Jax Center, mayday, mayday for SWAT zero one flight. Nearest airfield vectors". Jacksonville ARTCC responded with, "SWAT zero one flight zero niner zero, vectors Cecil" (Naval Air Station). SWAT 02 immediately advised Jacksonville ARTCC that they needed an airfield closer than Navy Cecil, something within 30 miles. Jacksonville ARTCC then cleared the mishap flight direct to Valdosta Municipal Airport at 31 miles and a heading of three (3) five (5) zero (0). Jacksonville ARTCC requested confirmation from SWAT 01 that both engines were out. SWAT 02 replied and stated that SWAT 01 was a single engine F-16 aircraft. (Tabs N and V - [redacted] Statement)

While SWAT 02 was performing the radio coordination with Jacksonville ARTCC, [redacted] (SWAT 01) pushed the nose of the mishap aircraft over to maintain 250 KIAS and began accomplishing the critical action procedures for an engine failure. [redacted] noticed the altitude was below 20,000 feet Mean Sea Level (MSL), started the Jet Fuel Starter (JFS), and began a JFS-assisted airstart using the Unified Fuel Control (UFC). This airstart attempt was unsuccessful. While still on a heading to Valdosta Municipal Airport and passing 13,000 feet MSL, [redacted] recommended to [redacted] to go to Backup Fuel Control (BUC) and to fly at 170 KIAS. [redacted] made two (2) unsuccessful airstart attempts in BUC noting that with each airstart attempt the maximum RPMs attained was less than the previous attempt. (Tab V - [redacted] and [redacted] Statements)

Passing approximately 5,000 feet MSL, [redacted] abandoned further attempts to start the engine and seeing a populated area dead ahead and what appeared to be an uninhabited area to [redacted] left, turned the aircraft left onto a Westerly heading, stowed [redacted] loose items, and at about 1,900 feet MSL, zoomed the aircraft and ejected at the apex of the zoom. SWAT 02 continued to orbit the area until [redacted] fuel state required [redacted] return to Tyndall AFB, at which time, a Navy F-18, that was to be the adversary in the training sortie, assumed the orbit over the area. (Tab V - [redacted] an[redacted] Statements)

E. IMPACT

On 31 August 1992, at approximately 1628 local time (EDT), the mishap aircraft impacted upon private property located in Hamilton County, Florida, 5 miles East of Pinetta, Florida.

The property contained primarily trees and underbrush. There were two inhabited dwelling structures approximately 150 yards from the impact point. This point was 23 nautical miles Southwest of Moody AFB, Georgia, at a latitude and longitude of 30 degrees 37.3 minutes North and 83 degrees 15.7 minutes West.

The mishap plane was completely destroyed with no loss of life and only minor property damage. (Tabs C, P, and S)

F. EJECTION SEAT

The mishap pilot ejected at approximately 2,000 feet above ground level. The ejection was successful and was conducted within the performance envelope of the system. (Tab V - [redacted] Statement)

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G. PERSONAL AND SURVIVAL EQUIPMENT

The personal and survival equipment inspections were reviewed and found to be current. The mishap pilot had a normal ejection and stated that because [redacted] saw water beneath [redacted] as [redacted] descended, [redacted] inflated [redacted] life preserver unit. [redacted] did not remove [redacted] oxygen mask because [redacted] was concerned with a possible water landing. The mishap pilot noted that [redacted] seat kit had deployed and made sure that the raft was hanging beneath [redacted] The mishap pilot landed on the ground. Once successfully on the ground the mishap pilot removed [redacted] parachute, life preserver, and harness. [redacted] then turned off the Emergency Locator Transmitter (ELT) in the seat kit and used [redacted] hand-held radio to contact [redacted] wingman. In order to help ground rescue efforts, the mishap pilot activated a smoke flare. The smoke flare did not work. The flare burned but no smoke came out of it. Additionally, the mishap pilot used several gyro jet flares, [redacted] whistle, and part of [redacted] parachute as signal devices to assist ground search efforts. (Tab V - [redacted] Statement)

H. RESCUE

The mishap aircraft crashed at 1628 hours EDT. Crash/rescue action was initiated by Valdosta Control Tower at 1628 EDT. Moody AFB Crash Recovery Team, notified by Crash Net, responded to the mishap. At approximately 1715 hours EDT, four civilians were the first individuals to locate the mishap pilot. The civilians transported the pilot to the aircraft crash site where [redacted] was turned over to the Madison County Sheriff's Office personnel, Madison County EMT Services personnel, and subsequently, to Moody AFB Medical personnel. While at the crash site [redacted] visited with the inhabitants of the property (three [3] members of the [redacted] family) in an attempt to have them vacate the area since the area had not been declared safe. The family declined to leave the area. The mishap pilot was transported to the Moody AFB Base Hospital for observation. (Tabs N and V - Security Police Log, Crash Fire Log, and [redacted] Statement)

I. CRASH RESPONSE

Upon notification of the aircraft mishap by the Moody AFB Crash Net, at 1633 hours EDT, the Moody AFB Disaster Response Group immediately began to respond by forming at the Moody AFB North gate. (Tab V - Security Police Log, Fire Department Log, [redacted], and [redacted] Statements)

At 1637 hours EDT, the Moody AFB Control Tower advised the Moody AFB Fire Department that the mishap pilot was out in an open field and wingman was overflying the crash site. (Tabs N and V - Fire Department Log)

The Moody AFB Disaster Control Group consisting of an On Scene Commander [redacted] and personnel from the Moody AFB Crash Fire (with one [1] "Chief One" vehicle and one [1] P-19 crash vehicle), Security Police, Explosive Ordnance Disposal (EOD), Public Affairs, Medical, and Bioenvironmental Engineering Services formed a convoy at the North gate of Moody AFB. The convoy departed Moody AFB at approximately 1718 hours EDT and arrived at the crash site at approximately 1819 hours EDT. Upon arrival at the site, they were met by representatives from the Madison County Sheriff's Office, who had arrived at the site at approximately 1734 hours EDT, Madison County EMT personnel, and local news media people who had also arrived prior to the convoy. (Tabs N and V - Security Police Log, Crash Rescue Log, and [redacted] and [redacted] Statements)

Local authorities had a group of on lookers stopped at a gate, which was established as the entry control point, approximately one quarter mile from the crash site. The Disaster Control Group convoy stopped at the gate and Moody AFB Security, EOD, and Fire vehicles proceeded through the gate into the field and up to the wooded area of the crash site. Some small spot fires were discovered and were extinguished utilizing approximately 100 gallons of water. The hydrazine cylinder was recovered and found to be empty. EOD began sweeping the area helping to extinguish small fires and collect 20 millimeter ammunition and Bioenvironmental Engineering Services personnel collected preliminary soil samples of the site. (Tab V - [redacted] and [redacted] Statements and Fire Department Log)

J. MAINTENANCE DOCUMENTATION

A review of all maintenance records for the aircraft and systems revealed no discrepancies or deficiencies relevant to the aircraft mishap. (Tab U)

All calendar and hourly inspections were current with the exception of a 120 day Aircraft Wash and Corrosion Control Inspection which was due on 15 August 1992 had not been accomplished. (Tab U)

All proper maintenance procedures were followed prior to the mishap flight on 31 August 1992. No discrepancies were found. (Tab V - [redacted], and [redacted] Statements)

K. MAINTENANCE PERSONNEL AND SUPERVISION

Training records for maintenance personnel were well maintained and properly documented. All maintenance personnel involved were task qualified. (Tab U)

L. ENGINE, FUEL, HYDRAULIC, AND OIL INSPECTION ANALYSIS

A review of engine records revealed no irregularities. All analysis of fuel, liquid oxygen, oil, and hydraulic fluids samples were normal. (Tabs D and J)

M. AIRCRAFT SYSTEMS

A review of the aircraft engine was completed by the San Antonio Air Logistics Center, F100 Propulsion Division/LPFE, Kelly AFB, Texas. (Tab J)

N. OPERATIONS PERSONNEL AND SUPERVISION

The mission was conducted under the authority of National Guard Regulation (AF) 51-50 (Vol XVII) to meet the requirements of Air Force Regulation (AFR) 60-1. The authorizing activity was the 475th Weapons Evaluation Group (WEG), Tyndall AFB, FL, Order No. 92-198, dated 31 August 1992.

The pre-flight briefing was conducted by [redacted] using the 120th Fighter Group Briefing Guide. The 120th Fighter Group Operations Officer, deployed to Tyndall AFB, was not present at the briefing. The briefing was thorough and adequate for the planned sortie and in accordance with applicable regulations, practices, and procedures. (Tab V - [redacted] and [redacted] Statements)

O. PILOT QUALIFICATIONS

The mishap pilot was a qualified F-16 pilot who was mission ready and qualified to fly this sortie. [redacted] flying experience is as follows:

TOTAL	F-16A	F-16B	F-16C	F-16D	AT-38
2,801.1	101.9	51.3	709.9	207.9	35.2

OTHER MILITARY	STUDENT	CIVILIAN
1,418 (U.S. Army)	251.9	25.0

PREVIOUS

30	60	90	
5.3	26.3	52.1	DAYS / HOURS

(Tabs G, T)

P. MEDICAL

The mishap pilot was medically qualified for flight at the time of the accident. The post-accident toxicological report produced negative results. The post-accident medical examination revealed no significant injuries. The mishap pilot was returned to flight status 1 September 1992. (Tab V - Ice Statement)

Q. NAVAIDS AND FACILITIES

NOTAMS (Notice to Airmen) were checked for the day of the accident and there were none that might have affected the mission. (Tab K; Tab V - [redacted], and [redacted] Statements)

R. WEATHER

The weather at the time of the accident was 5,000 feet scattered with 7+ miles visibility, winds 090 degrees at 2 knots, and temperature was 91 degrees Fahrenheit. (Tab W)

S. DIRECTIVES AND PUBLICATIONS

The following directives and publications were applicable to the mission:

AFR 60-1 (Flight Management)
AFR 60-15 (Aircraft Cockpit and Formation Flight Signals)
AFR 60-16 (General Flight Rules)
JR 55-79 (Aircrew/Weapons Controller Procedures for Air Operations)
NGR (AF) 60-1 (Flight Management)
NGR (AF) 51-50, Vol XVII (Tactical Aircrew Training-Air Defense)
NGR (AF) 51-10 (Command and Control)
COMACC Plan 85 (Air-to-Air Weapon System Evaluation Program)
USAF ADWC WSEP Plan 85
TACR 55-116 (F-16 Pilot Operational Procedures)
TACP 51-17 (G-Awareness for Aircrews)
AFM 51-37 (Instrument Flying)
T.O. 1F-16A-1 (F-16A/B Flight Manual)
T.O. 1F-16A-1CL-1 (Flight Crew Checklist)
T.O. 1F-16A-34-1-1 (Nonnuclear Weapons Delivery Manual)
T.O. 1F-16A-34-1-1CL-1 (Nonnuclear Weapons Delivery Flight Crew Procedures)
T.O. 1F-16A-6WC-1 (Workcards for Combined Preflight/Postflight, End-of-Runway, Thruflight, Launch and Recovery, Basic Postflight and Walkaround Before First Flight of Day for F-16A/B Aircraft)
TAFBR 55-1, Vol I (Tyndall AFB Local Operating Procedures)
120 FG Supplement 1 to TACR 55-116 (Great Falls IAP Local Operating Procedures)

FRANK E. TOBEL, Colonel, MT ANG
President, Accident Investigation Board